DOCUMENT RESUME

ED 358 516 EA 024 922

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TITLE Developing Model Student Information Systems: Promising Practices.
INSTITUTION Far West Lab. for Educational Research and Development, San Francisco, Calif.; Southwest Regional Lab., Los Alamitos, CA.
PUB DATE Dec 92
NOTE 119p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Database Management Systems; Data Collection; Elementary Secondary Education; *Information Management; *Information Systems; *Information Technology; Information Utilization; *Records Management; School Based Management; Student Characteristics

ABSTRACT

This paper describes promising practices in developing model student information systems, with a focus on information management and administrative record keeping. Three school districts with exemplary information systems are profiled, using data derived from document analysis, on-site observation, and interviews with district and site-level staff. The three sites profiled are: Anaheim Union High School District, California; San Diego Unified School District, California; and Montgomery County Public Schools, Maryland. Each profile describes the district's general information system, impetus and support for the system, how its technology is organized, types of data collected and used, problems and benefits of the system, and staff training. Strategies shared by the districts include: (1) obtaining stakeholder participation; (2) procuring top administrative and funding support; and (3) developing a data dictionary and common standards. Promising practices involve the use of interdistrict collaboration, site-based technical support staff, a monitoring system, and a long-term technology oversight committee. A finding is that, overall, school site administrators do not use student information data for decision making. Appendices contain information on the three districts' data systems. (LMI)

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# Developing Model Student Information Systems: Promising Practices

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Anne L. Hafner
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December 1992

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# HIGHLIGHTS OF FINDINGS

## The Development Process

Some common strategies are used by districts in developing student information systems:

- Get top administrative and funding support;
- Involve stakeholders (e.g., principals, district administrative staff, data processing staff, teachers) in development and monitoring of system;
- Develop overall plan and vision;
- Develop common standards and data dictionary; and
- Phase in system gradually, add modules over time.

## Promising Practices

Several practices appear to be promising in the development of a student information system:

- Use of district consortia to reduce costs and share information;
- Site-based technical staff support;
- Use of system to monitor student progress and improve the instructional program; and
- Long-term technology oversight committee as a forum for planning and hook for institutionalization.

## Examples of Data Use in Decisionmaking

Some interesting examples of administrator data use in decisionmaking were identified:

- Review student course history data to help make informed course placement decisions;
- Identify students at risk of failing and intervene immediately;
- Identify students with reading problems on proficiency tests and provide special help;
- Identify and track drug, crime, and discipline problems; and
- Analyze race and gender disparities in referrals and class placement.

## Ideal Characteristics in a Student Information System

Some ideal characteristics of a student information system were identified:

- Administrative and funding support;
- Flexibility and ability to satisfy both internal and external information needs;
- Clearly established standards and data dictionary specifying data elements and formats;
- Uniform documentation and maintenance of operational procedures;
- User-friendly system interface;
- Desktop access and training for all site-level managers;
- Adequate training and technical support;
- System interfaces with other systems;
- QUERY system to allow staff to generate lists or custom reports, combine databases;
- Site-level staff support; and
- Long-term oversight committee as a forum for planning and evaluating system.

# INTRODUCTION AND PURPOSE OF THE PAPER

The Metropolitan Educational Trends and Research Outcomes (METRO) Center seeks to improve the quality of information available at the school site for teams of teachers, parents, and administrators who are assuming new levels of responsibility for restructuring and managing school programs and operations. Many metropolitan districts and schools in this region are adopting formal programs for restructuring and site-based management. However, little attention is given to the kinds of information or information services that site-level managers will need to implement these programs. In this context, the METRO Center's site-based management project has three major objectives:

- to identify exemplary ways of using data to manage school sites and to evaluate the effectiveness of site-level programs in improving student achievement;
- to increase the capacity of site-level management teams to make data-based decisions that lead to improved student achievement; and
- to incorporate alternative sources of achievement information into the repertoire of information tools available to site-level management teams in low achieving schools.

At the inception of this project, the focus was on district uses of technology and information use. Over the past year, we contacted schools and districts in the Western region to ascertain promising practices. We found some examples of resourceful information used in districts and schools. These included using management information systems, updating student records, using computers to link various types of data, using test data to inform instruction, and integrating instructional uses with student cumulative record information.

However, it has become clear from our communications with districts and schools that many sites do not pay attention to the use of information in data-based decisionmaking. A majority of districts have student information systems of some sort, but many do not use data derived in such systems for everyday decisionmaking.

A general trend in school district administration is toward a greater focus on accountability for student outcomes and student achievement. In addition, many schools and districts are now interested in designing and using performance-based assessments aligned with curriculum frameworks and in making use of information generated thereby. They also have a need to demonstrate student progress over time. We have, therefore, shifted our original technology focus

to a focus on developing student information systems and the use of such systems for data-based decisionmaking, particularly with reference to student achievement and outcomes. A student information system is a data system that has an individual student as the unit of analysis.

One reason for this change in emphasis is recent evidence that data-based decisionmaking can contribute positively to school improvement efforts and to increased student achievement. For example, a new computer system in Montgomery County, MD, the School-based Instructional Monitoring System (SIMS), was recently given partial credit for increases in student test scores. The system enables principals and teachers to quickly identify student strengths and weaknesses. It provides individual schools with almost instant access to data on each student's performance that once took days to get. The system is described in detail in the Site Descriptions Section.

This paper describes promising practices in developing model student information systems. Three exemplary districts are profiled, and generalizations are made about establishing and maintaining such systems. Examples of data use in decisionmaking are given.

The following section describes how the districts were selected. Three site descriptions that detail each system follow. The last section presents findings, conclusions, and recommendations.

## SITE SELECTION PROCESS AND METHODOLOGY

In 1991 we began to develop a databank/network of districts and schools working on restructuring and site-based management projects. We sent out letters to districts in the Western region, asking for information on specific school sites. In addition, we telephoned districts and schools to gain information. From fall of 1991 to October 1992, a total of 27 districts and schools; 15 in California, 6 in Arizona and six in Utah. We collected documents from these districts. We expanded the network in 1992 and decided to focus on three "exemplary" districts' information systems to profile promising practices.

SWRL staff identified three school districts as being exemplary (two in Southern California and one in Maryland) in the summer of 1992. After the initial contact with district staff to gain agreement, METRO staff spent one to two days interviewing district and site-level staff and observing the operation of the system in schools. We also reviewed user manuals and other documents used by staff.

At San Diego City Schools, we interviewed the following people:
Gary Beaver - director of information services
Rose Moore - senior systems analyst, information services
Sharon Bennett - trainer
John Bennett - principal, Madison High School
Barbara Regan - Site technician, Madison High School
Various clerks and secretaries - Madison High School

At Anaheim Union High School District, we interviewed the following people:

Jock Fischer - assistant superintendent, education
John Walden - director, data processing
Jack Weber - principal, Cypress High School
Mel Komatsu - math teacher, Cypress High School
Various clerks and secretaries - Cypress High School

At Montgomery County Public Schools, we interviewed the following people:

Beverly Sangston - director of computer-related instruction
Ruth Orland - trainer
Judy Donbeck - trainer
Rick Metcalf - trainer, technical representative
Mike Glascoe - principal, Einstein High School
Roseann Arms - principal, Viers Mill Middle School
Various clerks and secretaries - Einstein and Viers Mill Schools

SWRL staff used an accountability system framework developed by Far West Laboratory to frame the questions. This framework describes five key areas for accountability system design and development: vision, information, technology, infrastructure, and linkages. For each of the key areas, three levels of system development are described—basic, intermediate and advanced. According to Far West, a "basic" system is driven by external compliance and oriented toward manager use, whereas an advanced system is driven by internal school needs and is oriented toward serving a larger group of users.

Using variables identified in Far West's accountability program assessment, SWRL staff constructed an unstructured interview outline/protocol. This included the following topics:

- Overview of System (objectives, purposes, focus, components, vision administrative support);
- Impetus and Support for System (process of development, how funded, startup and maintenance costs, data collection plans, staff involvement);
- Organization of Technology (hardware, software, record transfer capability, functions, user friendliness, level of sophistication, access to data);
- What Data are Collected and Used (screens/files, number and type of data elements, integration of internal and external indicators, frequency of use, interfaces, level of coordination among divisions);
- Level of Capability to Manipulate and Interact With Data (what staff can do, reports generated, raw and aggregated data);
- Staff Training (who trained, how, manuals);
- Problems Encountered and Solved; and
- Benefits to District.

Using these topics and areas, we conducted unstructured interviews.

## SITE DESCRIPTIONS

### Anaheim Union High School District

#### *Brief Overview of System*

Anaheim Union High School District is located in Orange County, CA. Orange County has the third largest child population among California's 58 counties: 24% of all residents are under 18. In addition, Orange County's children are more racially diverse than its total population: 46% are ethnic minority. Between 1980 and 1990, there was a 49% increase in the number of children living in extreme poverty in Orange County. Currently, 7% of children in Orange live in extreme poverty. In 1990, the total county child population of 589,303 consisted of 54% Anglo, 32% Latino, 12% Asian/other, and 2% African American.

Anaheim Union High School District, first established in 1898, currently serves 23,086 students in eight comprehensive high schools, eight junior high schools, three continuation sites, and a variety of other alternative education settings. It is located in central Orange County and includes several different cities. The district's size is stable now after 18 years during which the district declined at the rate of 1,000 students per year.

Changes in the ethnic group makeup of the district have been large. From 1980 to 1990, the percentage of students from minority groups increased from 23% to 55% of the total district population. The district's population now includes 45% Anglo, 37%, Hispanic, 12% Asian, 3% African American, 2% Filipino, 1% Pacific Islander, and .6% American Indian students. The percentage of limited English proficient (LEP) students has grown from 3.5% in 1980 to 30% in 1991. Sixty-three different languages are spoken in the schools.

There also have been changes in the socioeconomic status of the communities served by Anaheim. The percentage of students in families receiving Aid to Families With Dependent Children (AFDC) and free and reduced lunches increased from 25% in 1986 to 38% in 1991. The mobility rate (percentage of students who start a school year in the district who leave before the end of the school year) has grown over time to approximately 36%. In general, the surrounding community has changed from an Anglo middle-class community to an edge city, typified by socioeconomic shifts, high mobility, and increasing crime rates.

Cynthia Grennan has been the district's superintendent for 12 years. She has been very supportive of the development of the student information system and of its oversight committee, the Educational Technology Advisory Committee (ETAC). The director of data processing has been with the district for over 20 years and has been very instrumental in the development and maintenance of the current system.

Anaheim Union's current student information system is an administrative record-keeping system that aims primarily to serve students and to monitor their progress. The system is seen by the district as one that links information management with instructional delivery systems. Externally mandated reports and accountability are secondary goals. Another secondary goal of the system is to reduce burden on teachers. For example, in Anaheim Union, teachers no longer have to fill out annual California Basic Education Data System (CBEDS) forms, and class scheduling is automatic. The focus is both internal and external.

The system's primary unit of reporting is the individual student. Mandated reports (e.g., Chapter 1, CBEDS, R30, attendance); legal reports (e.g., lunch program eligibility, language census); district-scheduled reports (e.g., student schedules, course lists); and various ad hoc reports (e.g., suspension chart by reason, GPA ranges by sex, course deficiency lists) can be generated by the system.

### *Impetus and Support for the System*

According to Anaheim Union's director of data processing, the district had an IBM 1401 mainframe in the 1970s. This was a traditional card-based batch system. In the mid- to late 1970s, the district hired a consultant who recommended developing a new system, and the school board rejected the idea. Around that time, Anaheim Union began working with the Placentia School District on joint projects. Anaheim Union gave the Placentia district its software to help in the development of their computer system. Placentia implemented a DEC 2060 computer in the 1980s.

In 1980, Anaheim's district administration decided to develop a new system. The major impetus for the creation of the new system was the fact that different departments and units could not share information. The district administration asked the Placentia District for its software programs, and because the district had collaborated with Placentia, there was no charge for the programs. These programs represented about five years of development time (or an approximate cost of $250,000). The district bought a DEC 2060 mainframe and terminals for the schools. The cost was $600,000. In the first year, 16 schools were hooked up, including 30 terminals. At present, the system is operational in 20 sites.

Through 1989, the district used the DEC 2060. The DEC machine was no longer being made, however, and no more support for it was forthcoming from Digital. The Board was convinced of the need and decided to purchase a VAX mainframe from Digital. The system cost $1.2 million, and with a seven-year lease to buy and interest, the total cost came to $1.8 million. The software was moved from the DEC to the VAX. From the user viewpoint, the change was transparent as the programs and procedures were the same.

Maintenance costs for the program today are minimal. Although the terminals were initially provided to schools for free, schools that wish to add more terminals pay $465 for each one. The district pays for wiring costs.

There currently are eight full-time staff in the Data Processing Department. Two computer operators, two data entry technicians, and three programmers. The data entry technicians offer telephone support for the system during normal school hours.

An oversight committee, the ETAC, has been operating for about three years. It is intended to serve as a forum for planning, evaluating, and communicating the use of administrative and

instructional technology applications. The group developed a "Plan for the Continuing Implementation of Technology for the Anaheim Union High School District." Although the ETAC consists of 44 total members, made up of district administrators and staff, principals, teachers, counselors, technicians, secretaries, a parent, and three higher education representatives, the main planning team consists of nine members. Various subcommittees carry out different tasks. The "Plan" includes a long-term plan for implementing technology, including time lines and "next steps" to be taken in between 1990 and 1994. Some of the plans call for integration of administrative technologies with academic technologies, engaging in research and pilot projects, opening a technology resource center, and establishing a data base to streamline information for students from kindergarten to university.

## *How Technology Is Organized*

### *Hardware*

The district now has a VAX mainframe at the district office and the Data Processing Department is responsible for networking all schools. The district maintains the VAX mainframe and has a communications network with four servers linked to school sites. Appendix B displays the data communications configuration.

In the schools, all principals have a DEC computer terminal. High schools generally have 15 - 20 terminals, and junior high schools have 5 - 10 terminals, for a total of 275 operational terminals. The terminals are either VT220, VT320, or VT420s. School staff can not upload data to the district, but use direct access data entry. Data can be transferred to other schools.

### *Software*

Appendix A lists all computer program applications, including student applications, incident reporting system, payroll, personnel, cafeteria inventory, budget, A/V media scheduling, textbook inventory, and various state reports.

A Data Base Management System includes 23 different data bases (see Appendix A). When one logs onto the system, the main menu comes up on the screen. One can choose from (a) word processing; (b) electronic messaging; (c) desk management; (d) time management; (e) information management; (f) business applications; (g) communications; (h) more menu options; (i) training, or (j) exit workstation. Schools can request large reports and batch jobs through the system. Reports are then printed on the mainframe computer at the district office and sent to the school.

The high schools have a program called Guidance Information System (GIS). Students or their counselors can access the program along with individual student data to gauge readiness for a job or college entry.

### *Functions*

The system provides the following functions:

- Summary reports (e.g. number or names of students with perfect attendance, ethnicity);
- Access to individual student data, screens;
- Letter generator (e.g. students with all As);
- Master schedule generator (class load);
- Transcripts;
- Transfer/removal of students;
- Combination of data from 2 or more databases (e.g., STU, HIS);
- Label printing;
- Required reports (e.g., CBEDS, Chapter 1);
- Program reporting (e.g., gifted/talented, LEP);
- Teacher reporting (e.g., courses taught);
- Attendance reports; and
- Geographic sort (e.g. sort by ZIP code or school boundaries).

### *User-friendliness*

School site staff report to SWRL staff that the system is easy to learn. By watching school staff use the system, it appears to be very user friendly. It is obvious that some training is required to carry out the more complicated programs.

### *Level of Sophistication*

The district is fairly sophisticated in terms of ability to track individual students, to link files with feeder elementary schools and some postsecondary institutions, and in its use of technology. School site staff make extensive use of scanners for attendance, registration, scheduling, and grade reporting.

### *Access to Data*

Staff access to individual student data is generally restricted to only students enrolled at a particular school (although some district staff members have access to all district student data). Counselors, clerks, registrars, assistant principals, and principals use the system. Staff members must type in an ID code and a password. At the high school level, about 18-20 people per school have access. At the junior high school level, about 10-12 staff per school have access. Users are granted the authority to see some data files, to see and change some data, but not to see other data files. Some programs will be made available and some will not, depending on the user and his or her particular requirements.

The system is operational 24 hours a day, seven days a week. Schools often use the system after hours, and data processing staff use the system after hours for batch processing.

## *What Data Are Collected and Used*

### *Files*

Appendix A lists all applications and data bases available on the system. The major file is the Student Master File. The other major data bases are the Name and Address File, Attendance Data, Districtwide Student Data Base, Student Grades, Student Course History, Home Language Codes, Student Test History, Immunization File, Student Master Schedule, Attendance Reporting File, and Teacher Name Table.

### *Number and Type of Data Elements*

The Anaheim Union student information system contains about 500 data elements. The student master file contains 194 elements. In Appendix C, the Data Dictionary displays the elements contained in frequently used files. Types of data elements range from name, birthdate, locker information, classes taken, gang member identification, home language, Chapter I test scores, scores on district competency tests, absences, and class rank. Thirty-six elements are in the

student Test History File. They include student ID number, achievement test subscores, as well as scores on the district's proficiency tests.

### *Integration of Internal and External Indicators*

It was not always possible for SWRL staff to decide which data elements are externally required and which are internal. The two types of data are not easily distinguishable. Some of the management reports are required (about 15%), but many are not.

### *Frequency and Type of Use*

School site personnel, and in particular, attendance and enrollment clerks, schedule and grading personnel, and counselors, make frequent use of the system. Some assistant principals and principals use the system to generate reports. Principals and assistant principals also use the system when dealing with a student or parent regarding discipline or academic problems. Teachers are just beginning to use the system, thus they use it infrequently.

### *Interfaces With Other Systems*

System interfaces are computerized systems that enable a file to be shared between the student system and another department. Currently, the basic student system interfaces with Personnel and Data Processing. Files are only integrated when needed. For example, the Master Schedule and Personnel Files are integrated at the beginning of the school year. Currently, three elementary feeder districts, Anaheim City, Magnolia, and Centralia, are working toward sharing data with Anaheim Union.

### *Level of Coordination of Data Gathering Among Divisions*

In the past, there was not much cooperation among district divisions or departments on data gathering and use. However, with the current system, more staff members are coordinating as a way of reducing redundant reporting and staff burden.

### *Level of Capability To Manipulate and Interact With Data*

Staff can manipulate raw student data, aggregated or grouped data, and reports. One can pull up an individual student record (e.g., incident report record) and look at the student's record for one

year in terms of incidents. A staff member also can ask for grouped data, for example a list of all students at a certain high school who are LEP and whose GPA is under 2.0. One can look at class enrollments by ethnicity or gender to see if there are any differences in enrollments in various classes.

The system also can generate many types of reports. About 15% of reports are mandatory (e.g., LEP report, Chapter 1 report, attendance). Others are regularly scheduled district reports (e.g., Master Schedule, Staff Assignment List, projected enrollment). Many types of ad hoc reports are available.

Through use of the QUERY system, a data-based inquiry program, one can produce many types of output or reports from one or more related data bases (see Appendix E for a description). A staff member can list, total up, or skip records in a file, take a sample, or can combine data bases. Form letters and labels can be generated using QUERY. A common use is combining data from two data bases, for example the Student Master File and the History File.

A 10-year-old program called SMART (School Management and Resource Team) cosponsored by the U.S. Departments of Justice and Education, offers school and district administrators methods and techniques to identify and diagnose crime and discipline-related problems in the schools. The program was developed in response to changing demographics and increased crime levels to reduce campus crime, and provides systematic data collection and analysis about crime.

The district received a grant from the Department of Justice to develop a system for tracking criminal incidents. This system evolved into a student discipline system and data base. The Incident Report Data base has comprehensive information on students, including discipline records, category of crime, zone, group, data period, suspension data, criminal matrix summary, and top 10 teacher referrals.

Once a principal has this data base information, a SMART team is convened. This planning group is made up of teachers, students, parents, administrators, and others. This group creates a campus SMART plan that focuses on only one topic (for example, fights or locker thefts). The team continues to monitor progress and to keep track of the SMART plan's impact on improving that particular problem. Using the Incident Reporting System (see Appendix D), numbers are continually updated and reported. If the number of incidents go down, the SMART team will consider itself to be successful. If not, the team must meet and revise its strategy.

The use of the Incident Report data base by SMART teams in Anaheim Union is an example of data-based decisionmaking. By using this system, principals have found:

- The areas of the school and period of the day when most violence or disruption occurs;
- The students who cause disproportionate amounts of disruption; and
- The type of incident that is most common (see Appendix D).

Districtwide activities are coordinated as well using the SMART program. The Incident Reporting system is used to create a profile of needed services. A unified district prevention initiative is then produced. According to a district pamphlet, benefits that have been gained from use of the SMART program include:

- Reduced drug, crime, and discipline problems;
- Data to analyze race and gender disparities in suspensions and referrals;
- Objective incident data that indicate the level of safety in schools;
- Intervention strategies for students most disruptive to the educational process; and
- Cooperation among the schools, law enforcement, and social service agencies to concentrate efforts on specific problems.

Discussions with district data processing staff and school site administrators verify that some of the schools have used such data along with the SMART program elements to reduce discipline problems (e.g., fighting, locker thefts).

### *Staff Training*

Three of the eight data processing staff conduct training on the system for principals, assistant principals, clerks, and other staff. Trainers include the director of information services and the two data entry technicians. There is a training room at the district office with 12 terminals.

In the spring of 1992, the district offered 44 classes that generally ran for one to three hours. Appendix G lists some of the classes offered. They include classes on the general computer system, the accounting system, registration program, grading, transcript data, attendance accounting, student scheduler, QUERY, and word processing. Special classes are offered to people who want to be assistant principals.

### *Problems Encountered and Solved*

A major problem identified by district administration is the lack of personnel and time for school staff training. In addition to the director of information services, two staff members conduct training. Thus, not everyone can be trained at once.

Another major problem identified by staff is the high cost of starting up a student information system. Anaheim Union formed a consortium in 1980 with 17 other districts with the same kind of hardware and software. They continue to meet to help solve cost issues and to share problems. The group has monthly meetings. Sometimes Digital Corporation staff give a presentation, and sometimes staff share computer code or notes on new software packages. Another valuable resource to the district has been the California Education Data Processing Association (CEDPA), which has provided technical assistance.

District administrative staff also believe the district could improve in the teacher area in terms of making them more aware of the resources available. While the number of teachers making use of the system is growing, very few currently use it. This may be because they are unaware of the uses they could make of it and also because of lack of time for training. One high school math teacher interviewed uses the system to quickly view course history data of students who enroll in his classes. If a student did not pass the prerequisite course with a C grade or higher, he or she must retake the class. This teacher believes that this helps him make more informed placement decisions. Some teachers access students' discipline files, in case of excessive absences or academic difficulty.

### *Benefits to the District*

According to district and school staff, the major benefits of the student information system are:

- Provision of timely information to help monitor changes;
- Reduction of teacher burden;
- Provision of a support tool for dealing immediately with students and parents;
- Useful in local decisionmaking; and
- Useful for evaluating programs.

## *Conclusions*

Anaheim Union School District's student information system is a comprehensive, flexible one that contains many data elements, data bases, and programs. It focuses mainly on generating data and reports on attendance, schedules, registration, grade reporting, student grade and test history, and incident reporting.

Both internal and external information needs are served by the system. It provides data on a large number of indicators for internal and external assessment. There is a moderate degree of integration between indicators for external reporting and internal assessment. Not much coordination of data gathering is seen among divisions or departments. The district has a good long-range plan for technology implementation. There are clearly established standards (data elements) for collecting and reporting data on the characteristics of and performance of students.

In terms of technology, there is desktop access for all site-level managers, many staff, and only a few faculty members. Interfaces are user friendly. The system is quite sophisticated in its use of technology (e.g., scanners, computerized forms).

There is strong administrative support for the system and widespread participation in it, but little faculty support or participation. The district has full-time data processing staff for the system and provides training. A large oversight committee provides leadership for the system. The district plans to interface with feeder elementary schools and local colleges in the near future.

Although a goal of the system is to link information management with instructional delivery systems, opportunities for instructional use of the system are just beginning to be realized. The major uses made in the instructional area are in vocational classes (e.g., medical, accounting, airline reservations, and hotel/motel); design/art (e.g., graphic design and computer-assisted design); and math applications. Most of the computer classes offered are keyboarding, word processing, information processing, computer programming, and various Regional Occupational Program (ROP) computer applications. There are several math and reading labs offered in the schools, as well as some English/language arts applications. School staff members make some use of student data in program review, planning, and student services. There were a few staff interviewed who use the district data base to make placement and instructional decisions.

In general, the system is an extremely flexible administrative record-keeping system that provides a useful information management tool. It is exemplary in terms of technology and

software. The district is just beginning to work on linking information management with instructional delivery systems and on using data to track and improve student achievement. The district's example of using the incident data base to identify and track crimes or student troublemakers could be used as a model for developing similar programs in the student achievement area.

## San Diego Unified School District

### *Brief Overview of System*

San Diego County has the second largest child population among California's 58 counties: 24% of all residents are under age 18. In addition, San Diego County's children are more racially diverse than its total population: 47% are ethnic minority. From 1980 to 1990, there was a 57% increase in the number of children living in poverty in San Diego County (currently it is 15%). In 1990, the total county child population of 610,946 consisted of 53% Anglo, 29% Latino, 7% African American, and 10% Asian/other.

San Diego Unified School District (often called San Diego City Schools or SDCS) is the largest district in San Diego County, and is the eighth largest urban school district in the United States. In 1991-1992, the district's enrollment was about 124,000, which includes 160 schools. The district's population consists of 35% Anglo, 29% Latino, 20% Asian/other, and 16% African American. About 24% of the district's students are LEP.

Tom Payzant has been the district's superintendent for the past 10 years. He has been very supportive in the development and funding of SDCS's student information system (SIS). A major focus in the district is site-based management and shared decisionmaking.

The district's current Student Information System (SIS) was designed to provide a comprehensive administrative record-keeping system with quick scheduling and access to student records. Accountability is a secondary purpose of the system. The system's primary unit of analysis is the individual student. The system is designed to serve several masters, including school site users, central office staff, and external government entities. One subsystem (management reporting) is responsible for all reporting functions to meet districtwide requirements. This includes all mandated reports (e.g., Chapter 1, attendance, California Basic Educational Data System [CBEDS]), legal reports (e.g., lunch-program eligibility, language census), district-scheduled reports (e.g., student discipline actions, student schedules, course lists, transportation),

audit reports, and various ad hoc reports (e.g., selected class or course lists such as Chapter 1, class rank). Although anyone can request ad hoc reports, they are most often requested by site administrators. Although the system is designed to serve external needs as in the mandated reports, it also serves internal school site data needs. The system's flexibility enables the district to satisfy both internal and external needs.

The system incorporates many different files. In some cases, data are entered by the school site staff and in other cases, data are entered by central office staff. Each file is "owned" by a department in the district (e.g., School Operations, Personnel, Financial Accounting) and files differ in the number of personnel who have access to them. Ownership rules give the district confidentiality protection (see Appendix H for a graphic presentation of the files used).

### *Impetus and Support for the System*

Prior to the mid-1980s, SDCS had an IBM mainframe batch system that printed reports and sent them to schools. Schools did not have access to or use any information except for the district-generated reports. The IBM mainframe was used for scheduling, but the system was paper-intensive and there was a two to three week turnaround time. Much of the information at the school site (e.g., attendance data) was gathered manually.

The major impetus for the creation of the new system was feedback from a variety of users about slow turnaround. There was broad support at the district level for the system concept and resources were made available to develop a new system. In 1986, after the department administration approved of the concept, planning sessions began. District staff went first to users in the schools to get input. Central office users also were queried. Brainstorming sessions were conducted, in which groups of users created "wish lists" and a high level design—a big picture of what the computer system should look like.

District-level staff began work on developing and writing the Student Information System (SIS). The district decided to contract out for the high school component of the system. A Secondary Software Procurement Committee, made up of administrators, principals, central office personnel, Information Services staff, and SIS staff, was organized to write a Request for Proposals (RFP) for the high school software. The intent of the RFP released in the summer of 1987 was to design a comprehensive student record-keeping system with an on-line data-base update and inquiry capability to replace the batch system.

In December 1987, Educational Timesharing Systems was chosen to receive the contract. Their system, School Administrative Student Information (SASI), was installed, along with the district's SIS system, as a pilot project in seven schools in January 1988. Between September 1988 and September 1989, the system was installed in 34 more schools. The remainder of the schools were phased in during the 1990-91 school year.

The cost of the original project, including hardware, software, data communication lines and cables, staff time, and implementation was $7 million. Information is not available on actual expenditures in each of the above categories. The approximate annual maintenance costs for all district schools currently is $38,000. To add an additional terminal and a printer at the school site, the cost is about $2,000.

Currently, there are nine full-time staff at the district office who work on the SIS. There are six analysts, one manager, and two trainers. At each elementary school site, one or two clerks input student information. School counselors also work on the system part time. At the secondary level, clerks, some principals, and all vice principals are trained on the system. In addition, each high school has a full-time site technician who maintains the network and runs programs. These technicians have extensive training on basic and new screens and functions. The technician runs reports, builds queries, extracts information, uploads data to the district office, and runs backup files. At most high schools, staff can fill out a "Request for Service" form to request the site technician to run a job.

The district has a long-term plan for data collection. Some new files currently are being worked on, as well as new interfaces. The district currently is working on health, discipline, fees and fines, special education, and second language files. A SIS Advisory Group, made up of school site staff, central office staff, and Information Services staff, meets regularly.

## *How Technology Is Organized*

### *Hardware*

In terms of hardware, the district has an Amdahl 5890 mainframe computer. Each school site has IBM PS-2 model 30 computers and a Gateway computer, used as an interface with the mainframe. In the high schools, there is a server and a local area network (LAN), with several computers linked to the server. At elementary schools, there is no network. Elementary school staff cannot upload, but can input data directly to the mainframe. Data are sometimes downloaded to

elementary and secondary schools from the district. Each secondary school uploads data to share with other schools or for district reporting. Secondary schools can input data directly to the district and also can download data from the central office.

### *Software*

The major software system at the district level is the SIS, which was designed and written by district staff. When one logs onto the system, the menus from which one currently can choose are: (a) Central Office, (b) Elementary SIS, (c) Pupil Accounting, and (d) Secondary SIS. The Secondary SIS also consists of the SASI system written by the contractor. Schools can request batch jobs through the SDCS mainframe on-line system. Reports are then printed on the mainframe and sent to the school. All the schools have a user manual that includes a short tutorial, system codes, list of screens, and detailed sections on specific screens. These include grade reporting, enrollment, attendance, scheduling, student transfer, and grade history, along with a glossary of terms.

### *Functions*

Functions provided by the system include:

- Required reports (state and federal requirements);
- Student analysis (e.g., student characteristics, such as gender);
- Comparison/exception reports;
- Statistical analysis data (e.g., combinations of student, data elements and program activity);
- Program reporting (e.g., gifted and talented, LEP);
- Attendance analysis (e.g., average daily attendance, CBEDS);
- Chapter 1 roster (e.g., eligibility);
- New enrollees;
- Teacher reporting (e.g. courses taught, number of teachers per course);
- Districtwide program file;
- Attendance reports (e.g., state and district-required reports);
- Dropout prevention programs (e.g., clinics, work centers);

- Spanish language transition number of students in transition);
- Student program history (by courses or conditions);
- Health history;
- Free/reduced meal list;
- Magnetic media input (input from other systems such as AFDC); and
- Geographic sort (sort by school boundaries or ZIP code).

***User friendliness***

School site staff users report to SWRL staff that the system is very user friendly. Some of the functions can easily be learned by oneself, while other more complicated ones require training.

***Level of Sophistication***

The district is fairly sophisticated in terms of ability to track individual students, link files, and in uses made of technology. It makes widespread use of scanners for grade reporting and attendance.

***Access to Data***

Staff access to individual student data is restricted to those students enrolled at a particular school. One administrator at each school is responsible for its "security profile." At the elementary level, about three to four people have access (e.g., attendance and enrollment clerks, principal). Teachers do not have the ability to change data. At the secondary level, site technicians maintain site security. Counselors, clerks, and principals generally use the system. Staff members must type in a password, operator number, and name, and security codes are changed every 100 days. At the district level, staff can access all student data, but cannot change the data. The SIS is operational from 6:30 a.m. to 6 p.m. five days a week. Schools can, however, get permission to use the system after hours.

## *What Data Are Collected and Used*

### *Files*

Within the SIS system, there are seven subsystems. They are: General, Enrollment, Attendance, Management Reports, Scheduling, Grade Reporting, and Cumulative Student Record (see Appendix G for a list of all files and subsystems). In addition to these, there are interfacing files with Personnel, Transportation, and Testing.

Administrative information available at the school site include Budget Development, Film Circulation and Inventory, Payroll and Personnel, Maintenance and Operations, and Textbook Adoption program.

### *Number and Type of Data Elements*

The SDCS Student Information System contains about 200 basic data elements. Twenty-two data elements are required and about 180 are not (see Appendix H: Secondary School Data-base Elements). Required data elements include student ID, name, birthdate, gender, ethnic code, primary parent's name, address and telephone, and reason for enrolling in specific school.

Appendix I: Master Data Element Matrix lists and describes data elements are used. Appendix I also denotes which file each data element reside. Types of data elements range from class enrollments, class schedules, and attendance records to grade reports, class rank, graduation data, and LEP status.

### *Integration of Internal and External Indicators*

By looking at the Master Data Element Matrix, it is not always possible to decide which data elements are externally required and which are internal. The two types of data are not easily distinguishable. Many of the management reports are required, but many are not.

### *Frequency and Type of Use*

School site personnel, including attendance and enrollment clerks, schedule and grading personnel, nurses, librarians, and counselors, make frequent use of the system. Some assistant principals and

principals use the system to generate reports, although most request reports from the site technician (at the high school level).

Although teachers currently do not access SIS directly, they do receive information about students in the form of rosters and reports. Scannable input forms for attendance, grade reporting, and other data benefit teachers by decreasing bookkeeping tasks and duplication of reporting.

The system was primarily designed for school-site management and not for instructionally related matters. Although there is some interest at the superintendent's level in involving teachers more, fiscal constraints work against this occurring in the near future. In one high school (Madison), computer work stations currently are being placed in classrooms for teacher use in grade and attendance reporting. This is a five-year project funded by a private foundation. At present, only a few classrooms have terminals.

### *Interfaces With Other Systems*

System interfaces are computerized systems that require a file be shared between SIS and another department. Currently, SIS interfaces with Personnel, Testing, Financial Accounting, and Transportation departments (with limited data being shared). Several interfaces currently are being programmed. These include additional transportation elements, additional teacher information for CBEDS reporting, and elements from Planning, Research, and Evaluation to include student data pertinent to various evaluation and testing systems (e.g., ASAT test scores are now reported). Other possible future interfaces include Finance, Special Education, Community Relations, and Instructional Materials.

### *Level of Coordination of Data Gathering Among Divisions*

There has not been much coordination among district divisions or departments on data gathering. Currently, staff members are beginning to look to doing this as a way to reduce redundant reporting and staff burden.

### *Level of Capability To Manipulate and Interact With Data*

Staff can manipulate raw student data, aggregated or grouped data, and reports. One can pull up an individual student record (e.g., attendance file record) and look at the student's record for the semester, in terms of tardies and absences. A staff person also can ask for grouped data, (e.g., a

list of all students at X High School with grade averages of 3.5 or greater). One can look at class enrollments by ethnicity or gender.

The SIS also is able to generate many types of reports. One of the major objectives of the system is to provide maximum flexibility in selection and format options. There are four general types of reports: legal, scheduled, audit, and ad hoc reports.

Legal reports include:

- ethnic reports;
- breakfast/lunch program eligibility;
- official student records;
- monthly attendance register;
- language census;
- monthly attendance recap (e.g., special programs, LAU, Chapter 1); and
- federal survey cards.

Scheduled reports include:

- students enrolled (by grade, gender, ethnicity, and totals);
- 8th/10th-grade conferences;
- students at risk;
- student discipline actions (e.g., suspensions, expulsions, referrals);
- student schedules;
- course lists;
- grade level lists;
- teacher schedules;
- transportation;
- special program reports;
- OCILE (off-campus camp) program participants by school; and
- Regional Occupational Program (ROP) enrollment.

Audit reports include:

- transaction lists;
- update transactions/rejections;
- balance reports;
- verification between subsystems; and
- trouble reports/action log.

Ad hoc reports include:

- requests for student record, selected data items; and
- selected class list (e.g., selection of particular class, course, grade, and totals by selected characteristics such as ethnicity or Chapter 1).

Certain reports are generated upon specific performance outside of control criteria. School sites can identify action items for administration and reduce excess paper burden. For example, after a predetermined number of absences or tardies, letters to students' parents are generated. Another report is triggered by enrollment changes greater than a specific percentage, for example 2%. Other special reports can be generated in the areas of Chapter 1, reading levels, and ability to communicate in various home languages.

Within the SASI system, there exists a library of queries that makes up the QUERY system. This enables staff to generate lists or specific ad hoc reports based on specific criteria. Users of this subsystem can pull up a topic such as "gifted", "at risk," or "birthdate," and display, aggregate, or print tables or a report. A self-administered training guide exists, which allows one to train on QUERY fundamentals in about 1 1/2 hours.

The district is developing an "at-risk" data base, which currently is being piloted in seven schools. By the end of next year, an "at-risk" flag will be available to all schools.
This flag will be a composite of various demographic and academic indicators, and will enable school staff to quickly identify children at risk of school failure.

### *Staff Training*

There are two full-time SIS trainers at the district level. A training center is located at Taft Junior High School and consists of 15 workstations. At the elementary level, at least two people per site are trained to do primarily enrollment and attendance reporting. They are given 15 hours of basic training. At the secondary level, all vice principals, some clerks, and a site technician are trained. Site technicians get extended training (25 hours and over). Additional training is made available to schools each year as new files are brought up. Some specific courses are given for administrators, and a class in DATA QUERY also is given. This year, training is being given for a new "Progress Report" (report card) being implemented at the elementary level. Two teachers and two clerks at each school will be trained on this new system, and they in turn will train others at the school site. This year, between August and October, about 400 elementary school staff were trained on the system.

A User's Guide is available at the school site, and there is a telephone "HELPLINE" at the district level for staff questions.

### *Problems Encountered and Solved*

Training of staff was identified by the SIS coordinator as being not exactly a problem, but "a big undertaking." There are only two trainers. In the process of implementation, schools had to be phased in. New staff enter the district frequently, and the district has 160 schools. Thus, not everyone can be trained at once.

### *Benefits to the District*

According to staff, the primary benefits of the SIS are:

- Improved electronic processing of student information;
- Elimination of duplicate manual reporting;
- Better enrollment and attendance accounting mean potential increase in money received from state for attendance (ADA);
- Uniform documentation and maintenance of operational procedures;
- Streamlining of tedious record-keeping tasks such as attendance by use of an automated system; and
- Involvement of site principal, teachers, and staff in managing student attendance and progress.

## *Conclusions*

San Diego's student information system is a very flexible record-keeping system that appears to be a useful information management tool. The system is geared primarily for internal staff and administrator use. The district provided for stakeholder participation in the planning, development, and monitoring of the system. Both external and internal information needs are well-served by the system, as the system provides data on a large number of accountability indicators for internal and external assessment. The system is only secondarily concerned with accountability for outcomes.

There are clearly established standards (data elements) for collecting and reporting data on the characteristics and performance of students. A moderate degree of integration exists between indicators for external reporting and internal assessment. There is not much coordination of data gathering among divisions or departments. An oversight committee provides guidance for the system. The district has full-time student information staff, including one full-time trainer.

In terms of technology, there is desktop access for most site-based managers, many school site staff, and a few faculty members. The system is very sophisticated in its use of technology (e.g., scanners, computerized survey, and grading forms). The software is standardized, and good staff development exists. There is strong administrative support for the system.

There is some evidence that site-level school staff make some use of student data in program review, planning, and student services. No examples of use of data for decisionmaking were seen in visits to the district and one high school, although district Information Services staff maintain that with site-based management, schools are fairly autonomous in their decisions. Thus, district office personnel might not be aware of various uses made by principals of the system.

In general, most of the principals and teachers in San Diego Schools do not make use of the SIMS system. Principals tend to ask site technicians or a vice principal to run reports for them. For example, if a principal has a parent conference, he might request the site technician to run printouts of the student's attendance, discipline, or grades screens. The main users of the system at the high school level are attendance clerks, counselors, and the site technician. Counselors monitor student progress in terms of coursetaking, GPA, and attendance records. They use the QUERY program often to run reports. Another common use of the SIS is course scheduling, which is generally done by an assistant principal or head counselor. It may be that more training of

principals on the system would be useful in terms of putting decisionmaking tools into their own hands, rather than depending on others.

## Montgomery County (MD) Public Schools (MCPS)

### *Brief Overview of System*

Montgomery County is located in southern Maryland, and serves a growing population of more than three quarters of a million people in a county of 500 square miles. Since the early 1980s, the number of students attending Montgomery County Public Schools (MCPS) has grown by more than 16,000. MCPS is one of the nation's largest and fastest growing school systems. By 1997, an additional 21,000 students are expected to enroll, and further growth is expected. Since 1986, MCPS has opened 19 new schools, reopened 4 schools, and modernized 23 schools. In the fall of 1992, three additional new schools were opened and seven more are scheduled to open by 1997. Over the past 10 years, the area's population has become increasingly ethnically diverse. In 1991, the state of Maryland's population consisted of 60% Anglo, 33% African American, 4% Asian/Pacific Islander, 3% Hispanic, and 0.3% American Indian. The school district's population now includes 61% Anglo, 18% African American, 12% Asian/Pacific Islander, 10% Hispanic, and 0.3% American Indian.

Montgomery County Public Schools serves 111,988 students in 122 elementary schools, 25 intermediate/middle schools, 21 senior highs, and 9 special schools. The district's peak enrollment of 126,912 (reached in 1972) is expected to be surpassed by 1996.

International students account for 14% of the total enrollment. These students speak 1 of 97 foreign languages. The number of international students in MCPS has doubled in the past decade and continues to rise. About 6% of all students are enrolled in the English for Speakers of Other Languages (ESOL) program. This consists of about 7,000 students, more than double the figure 10 years ago. This is more than half of the ESOL student population in the state of Maryland. The district has a total of 13,674 staff members and a student to instructional staff ratio of 15.5:1.

Paul Vance has been the district superintendent for two years. He has been very supportive of the development and implementation of the district's new student information system. Katheryn Gemberling, the deputy superintendent for instruction the past three years, was the major developer and promoter of the system (originally as a principal at MCPS).

Montgomery County's School-based Instructional Monitoring System (SIMS) is considered by the district to be a tool to improve instruction, monitor individual student progress, and evaluate school programs. It is not an administrative record-keeping system, but rather aims to provide local schools with a vehicle for monitoring student and school instructional progress. The focus is exclusively internal at the site level. No externally-mandated reports are generated within the SIMS system. Administrative records are kept at the district level on an IBM mainframe. Macintosh computers for the SIMS are located in the schools and are linked to the mainframe, so schools can download student data such as grades and test scores.

SIMS consists of multiple data bases of test scores, grades, and student biographical information that comes from the mainframe and allows principals, counselors, and other school staff to monitor a student's progress. The system's primary unit of analysis is the individual student. Local variables can easily be added to a school's data base, including individual student achievement, instructional practices, support services, and other interventions. This allows principals to be managers of their own information and to monitor the effects of such interventions. A microcomputer network among school administrators, guidance and special programs (e.g., ESOL, Head Start, gifted and talented/honors, student support programs) provides immediate access to in-school information. As school staff members search through available data, questions arise. Information within the system is used to make instructional, as well as other types, of decisions.

### *Impetus and Support for the System*

Since the early 1980s, MCPS has had a mainframe computer (IBM 3090) that uses a batch system for scheduling, grades, report cards, and running reports. Today, all external reporting and mandated reports are done on the mainframe by the Department of Technical Planning and Data Operations.

The major impetus for the SIMS system came from the field. The current deputy superintendent for instruction (Gemberling) began work on what would become SIMS in 1984, when she was principal at Parkland Junior High School. Using an Apple computer, she created a data base of incoming seventh graders to improve placement into proper classes. She added other data to the original data base, including teacher recommendations. By using the data base, she came to realize that it could work as a powerful tool. She continues to hold that one becomes a more effective instructional leader by using the system.

In 1986, Gemberling moved to Kennedy High School as the principal. Using a Macintosh computer, she networked the system and made the information available to counselors and other school staff who were involved in monitoring student progress. After three years, Gemberling was promoted to associate superintendent for instruction and program development and then to deputy superintendent in 1989.

In 1989, Gemberling convinced the Board of Education and County Council to support funding for installation of SIMS in 23 schools as a one-year pilot program. Twenty-three elementary, middle, and high school principals were chosen as the first pilot group to test SIMS. According to an aide of Gemberling's, most of the principals were skeptical, as well as inexperienced computer users, but they agreed to try it. This was confirmed by a high school principal who was interviewed.

A training program was set up that consisted of about 15 hours for each person on a school team (four to five people). A principal had to be on the team since he/she would be assuming leadership and could not substitute another administrator. The remaining members of the team consisted of a secretary, counselor, support teacher, and teacher leader. The initial training provided information on the project's philosophy, a demonstration of the system, hands-on experience, and an overview of plans. Phase I schools began training in May of 1990 with the principals. Training of the school teams began in June 1990 and continued throughout the year. As part of the pilot, principals had to demonstrate that they had the data bases in place by the end of the year and were using them to make instructional decisions. By the end of the year, all 23 were enthusiastic about the system and others wanted in.

After the initial year, the County Council agree to fund the use of SIMS by schools if MCPS produced a training manual. The manual was written by June 1991. The Board of Education and County Council (funding agency) have been very supportive of the system. In 1991, 24 schools were added and in 1992, 45 schools were added. In 1993, 40 more schools will be added and in 1994, the 40 remaining schools will be added. By 1995, SIMS should be operational in every school.

Another impetus for the continued funding of the system was the release of a report by Edward Gordon in 1990 called, *A Study of Minority Student Achievement in MCPS*. The report found substantial gaps in the achievement levels of minority students and recommended a comprehensive effort to help them. In May of 1991, the Board of Education adopted seven "Goals for Improvement of Minority Educational Achievement." Four specific goals were subsequently

adopted by the district. These are: (a) ensure success for each student; (b) provide an effective instructional program; (c) strengthen productive partnerships for education; and (d) create a positive work environment in a self-renewing organization.

One result of these actions was the adoption of a plan to improve the achievement of low-to-average-achieving students by the Board of Education and the publication of a booklet, *Success for Every Student* that detailed the plan. The plan is outcomes focused. As the report notes, "Success for every student begins with the establishment of clearly defined student outcomes, the identification of each student who is not achieving those outcomes, intervention with appropriate strategies to improve each student's performance and monitoring of results." (*Success for Every Student,* 1992, p. 3).

The document presents clearly defined goals, broad strategies, and specified tasks for schools, central administrative departments, parents, and communities. The plan has an accountability element to ensure successful completion of each responsibility. Outcomes and performance standards are presented. Within the four goals, specific strategies and tasks are listed.

The goal most relevant to the SIMS system is Goal #2: Provide an Effective Instructional Program. One strategy included in Goal #2 is "Develop a more comprehensive system wide database on student progress that will facilitate more effective school and system wide monitoring of important indicators of student progress and success." Tasks listed under this strategy include making SIMS and training available in all schools and available first to schools with the lowest achievement levels; having associate superintendents and staff use available data to assess each school's progress as part of their review of school management plans; designing a computerized elementary report card system; and collecting criterion-referenced test scores in math and reading/language arts for use as baseline data.

The original cost of the system for the first year was $300,000, which included hardware, software, wiring, and four staff positions. The cost for the second year (24 additional schools) was about the same as for the first year. The third year (1992), 45 schools were added at a cost of $865,000. The approximate cost per school is $14,000 per elementary school and $18,000 per secondary school. If principals want additional computers, they need to budget money for the hardware, software, and wiring. The approximate cost of adding a workstation is $2500. Maintenance costs for the system today are minimal.

SIMS is a joint project with the Office for Instruction and Management Information Systems. There currently are seven full-time trainers. These trainers are responsible for providing countywide training, supporting assigned schools, and providing technical support to staff users on a telephone hotline. Additionally, topical training sessions are offered throughout the year at a training site.

Two or three times a year, Gemberling has "sharing sessions" with district principals. In some cases, principals give demonstrations of new applications or data bases.

## *How Technology Is Organized*

### *Hardware*

Appendix J displays the system's data communications configuration. The district has an IBM mainframe computer (IBM 3090) that uses a traditional batch system. All external reporting and mandatory reports are done on the mainframe by the Department of Management Information and Computer Services. The SIMS system downloads data from the mainframe to school sites six times a year.

Each school is equipped with a local area network (LAN) consisting of Macintosh computers (SE-30s, LCs, or SIs) and a laser printer. The number of computers in the schools depends on the grade level of the school (e.g., high schools have more). In addition, schools have IBM workstations to download data from the district mainframe. In some schools, computers float among departments as needed.

### *Software*

The major software package used by SIMS is Microsoft Works. One of two communications packages (TOPS or MAC-IRMA) is used to transfer data to the Macintosh.

All of the schools have User/Training manuals that include a tutorial, information on how to access and use data bases, how to generate reports, and how to download data.

### *Functions*

The system provides the following functions:

- Ability to "scroll through" data;
- Ability to build local databases;
- Extract data from database and create school files;
- Access to individual student data;
- Program reporting (e.g. Gifted and Talented);
- Free/reduced lunch lists;
- Sort capability (e.g., race, grade);
- Grade reporting (middle and high schools);
- Attendance reports;
- Summary reports;
- Letter and label generator (mail merge); and
- Grade-point average (secondary schools—not official).

See Appendix K for a description of the quarterly downloads of SIMS. In this process, report card data are collected by teachers and bubble sheets are completed and sent to the district office. Grades are scanned into the IBM mainframe. Data are extracted from the database creating school files (e.g., courses, grades, test scores, biographical information). Data are then electronically downloaded from the mainframe by schools into the IBM/PC, and data are transferred to MACs using the TOPS or Farallon Phonenet interface.

### *User friendliness*

School site staff interviewed all seemed to think the system was very user friendly. Using Macintosh computers and Microsoft Works helps in this area. Getting principals and other staff who are not computer users to use the microcomputer as an instructional tool was the motivation in selecting this user-friendly configuration.

### *Level of Sophistication*

The system is sophisticated in its use of technology. It has scanning capability and an IBM-Macintosh interface, and can communicate with the IBM mainframe.

### *Access to Data*

Staff access to individual student data is restricted to students enrolled at a particular school. Counselors, secretaries, teachers, assistant principals, and principals use the system. Passwords may be used to access the SIMS system. Passwords are needed to download data from the mainframe to the PC at the school site.

In the Macintosh local area network, if a staff member has data in the public folder, anyone using his or her machine over the network can view or change that data. If a staff member has data in the school folder, anyone can view the data, but not change it. Staff can keep confidential data in a confidential folder that can only be accessed with a password. The SIMS system is operational whenever the school staff needs access to it.

## *What Data Are Collected and Used*

### *Files*

Appendix L lists all data bases available on the system. The Student Biographical File (STUBIO), is available for all school levels. The other data bases for the senior high schools include: GUIDANCE, FUNCTIONALS (Maryland competency test scores), COURSES (for two semesters), and SAT. For middle and intermediate schools, the additional data bases include GUIDANCE, FUNCTIONALS, AND COURSES. For elementary schools, additional data bases include GUIDANCE only.

School staff members have the ability to create additional data elements in an existing data base or to create new data bases. Some schools have created DISCIPLINE data bases, which record suspensions, referrals, and similar data.

*Number and Type of Data Elements*

Appendix L displays all of the data elements in the data bases. The SIMS system contains 218 data elements per high school. This includes 39 elements in the STUBIO files, 49 elements in the GUIDANCE file, 58 elements in the FUNCTIONALS file, 37 elements in the COURSES file, and 35 elements in the SAT file. In the MIDLEVEL school, the system contains 165 data elements. In the ELEMENTARY school, the system contains 74 data elements. There are various types of data elements ranging from ID number, name, address, telephone number, days absent, participation in programs, test scores, and courses taken.

*Integration of Internal and External Indicators*

None of the indicator data on the SIMS are externally required ones. The system was designed for internal use only.

*Frequency and Type of Use*

School site personnel, in particular, teachers, secretaries, counselors, assistant principals, and principals, make frequent use of the system. The degree of use varies from school to school. Secretaries mainly use the system to key in student data, while administrators and counselors use the system more to monitor student progress. Because of the limited number of computers, they are primarily used by principals, teachers, and secretaries, who in turn share data informally. Although teachers do not generally make widespread use of the system, there are many reports generated used by teachers. These include class lists and grade lists. Staff members in one school who were able to buy additional Macintosh computers report that having access to additional computers enables and encourages more teachers to use the system.

*Interfaces With Other Systems*

The SIMS system currently interfaces only with the district mainframe, which is necessary for grade, test score, and attendance reporting.

*Level of Coordination of Data Gathering Among Divisions*

At MCPS, the Department of Management Information and Computer Systems (DMICS) works with the Instructional Division and the Technology Planning and Data Operations Department to

coordinate the data files to be provided to SIMS schools. There is a high level of cooperation among these divisions.

### *Level of Capability To Manipulate and Interact With Data*

Staff can manipulate raw student data, aggregated or grouped data, and reports. One can pull up an individual student record and look at the record (e.g., for test scores) and view, for example, the student's test scores for the past year. A staff member can ask for group data, for example, a list of all students at a high school who failed the Maryland reading competency test. One can look at class enrollments by ethnicity or gender to see if there are differences in enrollments in various classes or in achievement. Some principals look at teacher grade distributions to look for disparities among teachers or departments. This could not be done with the paper reports that principals previously received from data processing. The ability to "stroll through" the data makes this easier and more efficient.

SIMS currently does not have a QUERY system capability. Data elements from two data bases can be pulled together manually using cut and paste in MICROSOFT WORKS, but two data bases cannot be merged or combined. The district currently is investigating the use of a relational data base for this purpose.

One example of how one can manipulate data came from a high school principal. He was concerned about at-risk students, and decided to identify and monitor certain students. He identified students who were multiple suspendees with low stanine test scores and high numbers of absences. Children so identified were each given a mentor teacher who would check on students' absences and work with the students on academic problems. Students also were given remediation sessions and practice tests. The principal also uses seventh-grade test scores and subscores for class placement.

An elementary school teacher identified a fifth-grade student whose grades were above average, but whose standardized test scores showed the child to be in the 20th or 30th percentile and to have a language disability. The teacher and principal worked together and provided special help to improve the girl's performance. Although this fifth grader's learning disability would have eventually been discovered, SIMS identified the problem early, when corrective actions could be more effective. Instead of taking several weeks to compare test scores and grades of all 483 children at that school, the task was completed in seconds. From the time the school recorded the

test scores and the comparison was made to the start of the testing that diagnosed the problems, only one week had passed.

### *Staff Training*

Appendix M displays the training and support available on the SIMS system. The basic large group training takes place in July with the school "teams" (four to five people from the school site, including the principal), and consists of five three-hour sessions. Topics covered include introduction to the Macintosh and Microsoft Works, overview of file layouts, data base topics including sorting, saving, renaming fields, creating data bases, generating reports, review of hardware, and file sharing. Other courses are offered in the fall and winter, and include word processing, data base use, using COURSES data base, and sharing sessions with SIMS users and principal meetings. Some small group sessions are offered for LAN administrators or the staff member within a school who is the contact person with the district staff. The LAN administrator takes on the duties as "extra" duty. This person also may provide some training to school staff. Schools also may request small group topical training for their staff throughout the school year. Trainers go out to their individual schools to do on-site training throughout the year.

There are seven full-time SIMS trainers at the district level. A training center is located at a district adult education building and consists of 30 Macintosh work stations. The SIMS trainers serve as hotline support for all SIMS schools. A SIMS "HOTLINE" is open nine hours a day for help. User's Guides are available at each computer workstation. A LAN administrator (who generally has additional training and more extensive knowledge of the system) is located in every school. Some principals use instructional assistants to input data, run reports, and other similar duties.

Trainers see their job as being service oriented. They like to keep up with what school staff need and want. For example, when the system first started, it consisted of just the STUBIO and GUIDANCE files. Other files (e.g., FUNCTIONALS and SAT) were added later because of staff requests.

### *Problems Encountered and Solved*

One problem that occurred early on was an initial resistance to the SIMS system on the part of principals. Many were familiar with IBM computers (or none at all) and were skeptical of the usefulness of such a system. Yet, interviews reveal that once principals, teachers, and other staff

are shown their own school data on the computer and examples of what they can do with it, they become involved and excited about it. Once people feel that the data is something real that they can relate to, they become more convinced of its usefulness.

Another problem mentioned by district staff is keeping up to date on hardware and software advances. For example, the district is looking into adding a relational data base to the system to allow linkages of data bases. However, the concern remains that it be easy to learn.

Although the district has seven full-time trainers, some staff believe it could use more trainers and training.

### *Benefits to the District*

According to district and school staff, the major benefits of the SIMS system are:

- Used only for internal purposes;
- Immediate access to individual student data;
- Ease of locating and sorting student data;
- Helps improve instructional program;
- Ability to monitor student and school progress;
- Elimination of oversights that might allow students to slip through cracks;
- Saves teachers and principals time and effort; and
- Enables schools to share records.

### *Conclusions*

Montgomery County's SIMS system is geared primarily for internal use. The district is quite different from the other two districts profiled in its system's exclusive focus on internal information needs, which are well served by the system. The district provided for stakeholder participation in the planning, development, and monitoring of the system. The system provides data on a large number of accountability indicators for internal assessment. There are clearly established standards (data elements) for collecting and reporting data on the characteristics and performance of students. There is quite a lot of coordination of data gathering among divisions or departments.

In terms of technology, there is desktop access for most site-based managers, some staff, and a few faculty members. The system is sophisticated in its use of technology (e.g., scanners, computerized survey and grading forms). The software is standardized and quite user friendly, and extensive staff development and training exist. The district has seven full-time trainers supervised by the Office for Instruction and Program Development. There is strong administrative support for the system, but limited faculty use or support.

There is a lot of evidence that site-level school staff make use of student data in program review, planning, and student services. Several examples of use of data for decisionmaking were seen. These include (as previously described) identification of at-risk students, monitoring student achievement, and identifying learning disabilities.

For example, an elementary school principal set up a new discipline data base. By using the data, she found that most fighting incidents took place first thing in the morning before school started. She found that many children who were bussed arrived at the bus stop 45 minutes early and were unsupervised. They would get into fights and sometimes bring the disputes to the school The principal involved teachers and parents in solving this problem. Parents agreed to monitor the bus stops. The principal found a way to get the students in classrooms or the cafeteria when they arrived, rather than being unsupervised on the playground. This principal is very enthusiastic about using the SIMS as a decisionmaking tool.

Schools also maintain that use of the SIMS helped to pinpoint students' weak areas on a statewide reading and math test and helped increase the percentage of students passing the test. Students who were at risk of failing the exam were identified and targeted for extra help in reading or math. The greatest gains on the test in 1991 - 1992 were made by minority students and in schools using the SIMS.

Montgomery County's student information system is an exemplary administrative information management tool. Its technology, software, and training are excellent. In addition, there is a great deal of evidence that site-level school staff, including teachers, counselors and principals make use of student data in program review, planning, and student services. Several examples of uses of data for decisionmaking were seen in visits to two schools in the county, and others were described by staff or in newspaper articles. Of all three systems profiled, SIMS seems to have gone the farthest in terms of staff actively using data for decisionmaking at the site level.

# CONCLUSIONS AND RECOMMENDATIONS

## Findings

### *Development Strategies*

The development of a districtwide student information system is an incremental process that is influenced by many things, including emerging technology, current management trends (e.g., site-based management ), leadership, and funding available.

Even though resources and data needs vary widely, there were some common strategies used by the districts in developing their systems. First, stakeholder participation (e.g., involving data processing personnel, principals, counselors, teachers) was sought by all three districts to obtain grass roots support. In addition, all found it necessary to gain top administrative and funding support. Third, all of the districts developed a data dictionary and common standards for use. All districts phased in the system gradually, adding subsystems or modules over time. In addition, not all schools were put on-line at the same time.

### *Barriers to Development*

The major barriers to the development of a student information system are (in order of importance):

- High cost ;
- Lack of staff time and training for local staff;
- Confidentiality and privacy concerns;
- Accountability concerns; and
- Perceived need for data for decisionmaking.

The high initial cost of developing a student information system is an obvious barrier faced by many districts and schools in this downsizing era of budget cuts. Lack of sufficient number of trainers and lack of staff time for training were cited by two of the districts as problems. The staff issue is somewhat related to the cost issue. There are some concerns about student confidentiality and privacy issues, although these do not seem to be large.

Because of the recent public demands for accountability in education, school systems now gather information on student outcomes to monitor progress. This is largely done at the district level and not at the school level. Student information systems should allow school site administrators to be managers of their own local information without an external accountability concern.

Staff members' perceived need for the use of data systems in decisionmaking also can operate as a barrier to system development. Teachers and principals have been making decisions based on hunches, test score printouts, grades, and judgments for years. It may be necessary to show school staff examples of how they can use such data to make better and more informed decisions.

### *Incentives*

The major incentives to develop such systems are:

- Reduction of administrator and teacher burden;
- Reduction of paper data burden;
- Provision of more timely information;
- More reliable enrollment and attendance accounting;
- Reduction of tedious record-keeping tasks (attendance);
- Strong support tool for school site staff and administrators; and
- Involvement of principal, teachers, and staff in managing student progress.

Reduction of teacher and administrator burden and paper data burden is a major incentive. More timely provision of information is another obvious advantage, as well as reducing tedious record-keeping tasks that still remain manual tasks in many schools (e.g., attendance, grade reporting). Use of these systems as support tools for school site staff is an incentive that is not so obvious.

### *Promising Practices*

Some promising practices have been identified among the districts studied. It should be noted that not all of the districts display these practices. The first is the use of collaboration among districts or district consortia to reduce costs and to share information and programs. The second practice is

the use of site-based technical support staff to aid in use of the system. A third is use of the system to monitor student progress and improve the instructional program. Lastly, a long-term technology oversight committee can be used as a forum for planning and as a hook for institutionalization. These practices are considered promising in that they can save the district time and money, or help increase use of the system and improve the instructional program.

## Conclusions and Recommendations

Districts vary somewhat in the degree to which their systems are used for internal vs. external reporting. The San Diego Unified and Anaheim Union systems were designed to serve both internal and external needs, whereas Montgomery County designed its system to focus only on internal uses. All three districts have had prior experience with automated student systems.

The major focus of two of the student information systems profiled here is information management and administrative record keeping. These districts did not focus on accountability as a primary purpose of their system. In these, it was more of a secondary purpose. Montgomery County Public Schools was the only system that listed accountability as a primary focus. Other secondary foci included reducing teacher and administrator burden and meeting externally mandated reporting requirements.

Overall, school site administrator use of data in a student information system for decisionmaking is not widespread. The most common use of such data is for generating form letters, school lists, or reports for internal or external purposes. There is, however, a great deal of variation in the level of use among administrators. Many administrators make no use of such data, and depend on clerical staff and counselors to run the system. Others are frequent users.

One key to getting administrators "hooked" on using such a system was suggested by a principal in Montgomery County. He maintained that principals and other busy administrators found it difficult to understand how data in such a system could be useful to them in their daily lives, until they were provided with an example of data from their own school, and shown how they could manipulate and use it. For example, when district trainers come out to the school site, they often bring data from that school to use for demonstrations. When school staff see the names of their students on the screen or on a printout, and see how the system can be used to generate lists or reports, it becomes more interesting to them and real, in that they know and relate to the actual students on the screen. It may be that providing concrete examples may be a necessary precondition to getting administrators "on line" to the system.

# APPENDIX A

## ANAHEIM UNION HIGH SCHOOL DISTRICT

## COMPUTER APPLICATIONS AND DATA BASE CODE LISTING

## Anaheim Union High School District
## Computer Applications

**Student-related applications**

- Comprehensive database including home & mailing address, phone numbers
- Registration and scheduling
- Course history and Graduation/promotion requirements
- Language Assessment/Chapter I tracking
- Progress reports (including summer school)
- Grade Reports (including summer school)
- Testing (achievement and proficiency)
- Attendance (monthly and period)
- Immunization records and Master Schedule
- Special Education
- Athletic eligibility
- Grid system for address verification/attendance tracking
- Career guidance

Incident Reporting System (including referrals)

Student Transfer Tracking, Hearings and Appeals

Payroll/Position Control

Personnel

- Seniority
- Vacation/sick leave
- Teacher substitute notificiaton/treacking
- Test reporting

Cafeteria Inventory, Orders/Sales and Profit/Loss

Budget-related Programs

- Purchase orders/warrants
- Warehouse stores
- Financial statement
- Budget preparation

A/V Media Scheduling

Textbooks Inventory/Inquiry

Various State Reports

- CBEDS
- R30

Word Processing and Electronic Mail
Variety of surveys and statistical analysis

Equipment Inventory
Transportation & vehicle accounting

## DATA DICTIONARY

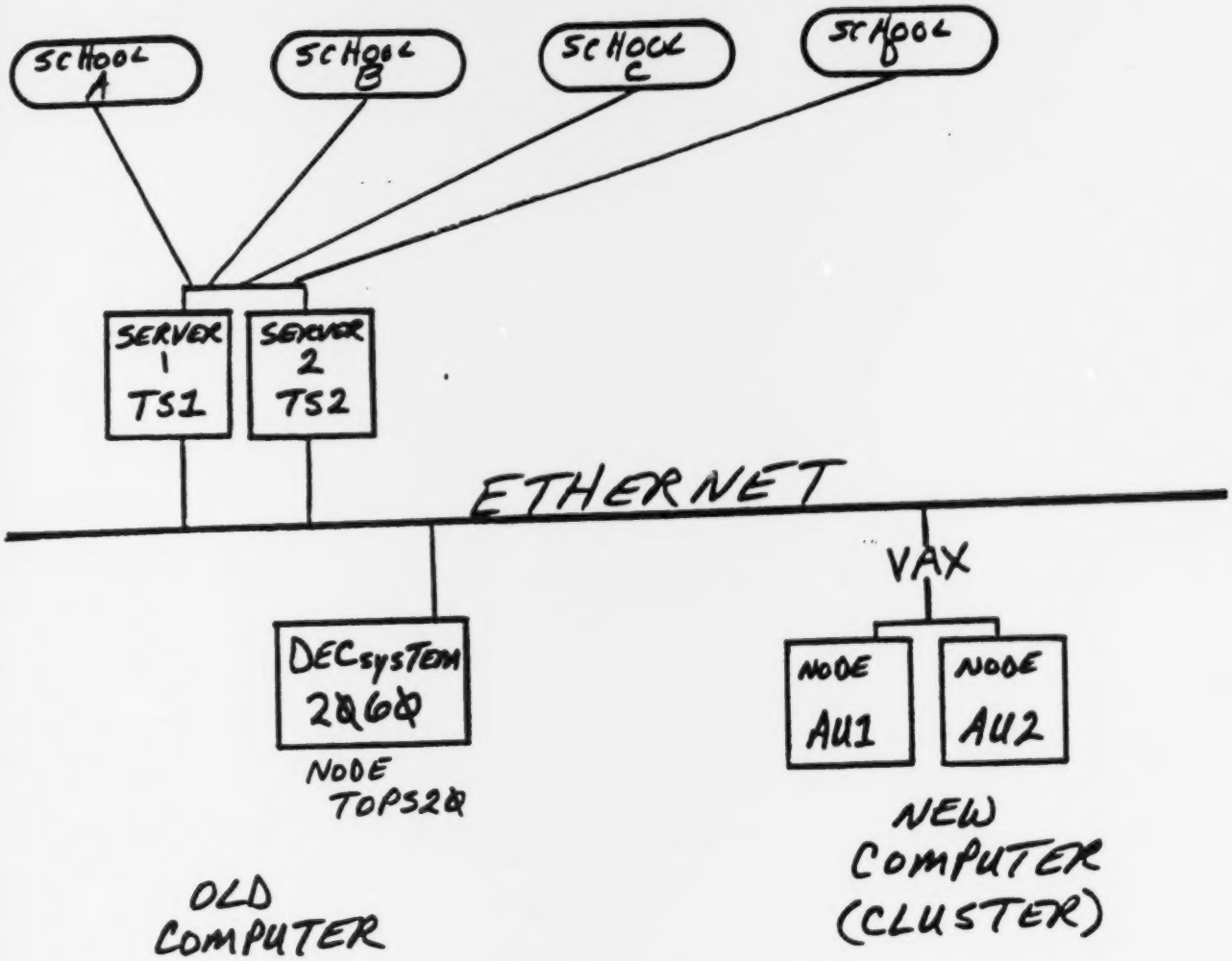
## DATA BASE CODE LISTING

| CODE | TITLE |
|---|---|
| ADR | Users' Name & Address File |
| ATT | Attendance Data - Student |
| CRS | Course Titles - District Wide |
| DST | District Wide Student Data Base |
| ECA | Extra Curricular Activities File |
| GRD | Student Grades - Current QTR |
| HIS | Student Course History |
| HLC | Home Language Codes |
| HSG | Student High Sch Grad Reqmts |
| HST | Student Test History |
| IMM | Immunization File |
| JHG | Student Jr Hi Sch Grad Reqmts |
| MMF | Media Master File |
| MST | Student Master Schedule |
| PAC | Period Attendance Class File |
| PAL | Period Attendance List File |
| PAR | Attendance Reporting File |
| QTR | Student Quarter Grade File |
| SMS | Sched Master Sched File |
| SPS | Secondary Special-Ed File |
| SSS | Scheduling Student Course Requests |
| STU | Student Master File |
| TCH | Teacher Name Table |

# APPENDIX B

## ANAHEIM UNION HIGH SCHOOL DISTRICT

## DATA COMMUNICATIONS CONFIGURATION




NEW
DATA COMMUNICATIONS
CONFIGURATION

APPENDIX C

ANAHEIM UNION HIGH SCHOOL DISTRICT

# DATA DICTIONARY:
# STUDENT MASTER FILE
# STUDENT TEST HISTORY

# ANAHEIM UNION HIGH SCHOOL DISTRICT

## DATA DICTIONARY

CODE: STU FILE: STU TYPE: I2 TITLE: STUDENT MASTER FILE CODE: STU

QUAL: YYSSS GROUP: 03 RECORD: 943 BLOCK: 1 09/09/92

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| 1 | SN | 1 | NUMBER | N | 23 | 6 | | 1 | | | | 6 STU-NO |
| 2 | NM | 2 | NAME | G | 29 | 24 | | 1 | 4 | | | 24 STUDENT-NAME |
| 3 | LN | | LAST-NAME | A | 29 | 13 | | 1 | | | | 13 LAST NAME |
| 4 | FN | | FIRST-NAME | A | 42 | 10 | | 1 | | | | 10 FIRST NAME |
| 5 | MI | | MI | A | 52 | 1 | | 1 | | | | 3 M/I |
| 6 | SX | | SEX | A | 53 | 1 | | 1 | | | | 2 SX |
| 7 | GR | | GRADE | N | 54 | 2 | | 1 | | | | 2 GR |
| 8 | SP | | SPECIAL | A | 56 | 1 | | 1 | | | | 2 SP |
| 9 | EC | | ETHNIC-CODE | N | 57 | 1 | | 1 | | | | 2 EC |
| 10 | ST | | STATUS | T | 58 | 1 | | 1 | | | | 3 TAG |
| 11 | AG | | ADDRESS-APT | G | 59 | 34 | | 1 | | | | 34 ADDRESS-APT |
| 12 | AD | | ADDRESS | A | 59 | 24 | | 1 | | | | 24 STREET ADDRESS |
| 13 | AP | | APT | A | 83 | 10 | | 1 | | | | 10 APT # |
| 14 | CY | | CITY | A | 93 | 15 | | 1 | | | | 15 CITY |
| 15 | PG | | PARENT | A | 108 | 21 | | 1 | | | | 21 PARENT/GUARDIAN |
| 16 | HP | | HOME-PHONE | G | 129 | 10 | | 1 | | | | 10 HOME-PHONE |
| 17 | HA | | AREA-CODE | N | 129 | 3 | | 1 | | | | 3 A/C |
| 18 | TL | | TELEPHONE | N | 132 | 7 | | 1 | 3 | | | 9 HM PHONE |
| 19 | ZT | | ZIP-PLUS-FOUR | G | 139 | 9 | | 1 | | | | 9 ZIP+FOUR |
| 20 | ZC | | ZIP-CODE | N | 139 | 5 | | 1 | | | | 5 ZIPCD |
| 21 | ZS | | ZIP-SUFFIX | N | 144 | 4 | | 1 | | | | 4 ZC-4 |
| 22 | SG | | STDY-AREA-GRID | N | 148 | 5 | | 1 | | | | 11 ST-AREA-GRD |
| 23 | BD | | BIRTHDATE | G | 153 | 6 | | 1 | 2 | | | 9 BIRTHDATE |
| 24 | MB | | MNTH-OF-BIRTH | N | 153 | 2 | | 1 | | | | 2 MO |
| 25 | DB | | DAY-OF-BIRTH | N | 155 | 2 | | 1 | | | | 3 DAY |
| 26 | YR | | YEAR-OF-BIRTH | N | 157 | 2 | | 1 | | | | 2 YR |
| 27 | WP | | WORK-PHONE | G | 159 | 10 | | 1 | | | | 10 WORK-PHONE |
| 28 | WA | | WORK-AC | N | 159 | 3 | | 1 | | | | 3 WAC |
| 29 | WT | | WORK-NO | N | 162 | 7 | | 1 | 3 | | | 9 WORK-NO |
| 30 | WM | | WORK-MOTHER | G | 169 | 10 | | 1 | | | | 11 WORK-MOTHR |
| 31 | MA | | MOTHER-AC | N | 169 | 3 | | 1 | | | | 3 MAC |
| 32 | MT | | MOTHER-NO | N | 172 | 7 | | 1 | 3 | | | 9 MOM-PHONE |
| 33 | BP | | BIRTHPLACE | A | 179 | 20 | | 1 | | | | 20 BIRTHPLACE |
| 34 | CL | | CLASSES | G | 199 | 48 | | 1 | | | | 48 CLASSES |
| 35 | S# | | SECTION | N | 199 | 4 | | 12 | | MST | | 4 SEC# |
| 36 | LO | | LOW-PERIOD | N | 247 | 1 | | 1 | | | | 2 LO |
| 37 | HI | | HIGH-PERIOD | N | 249 | 1 | | 1 | | | | 2 HI |
| 38 | LK | | LOCKER | A | 249 | 4 | | 1 | | | | 6 LOCKER |
| 39 | DT | | DEBT | A | 253 | 1 | | 1 | | | | 4 DEBT |
| 40 | GA | | GATE | A | 254 | 1 | | 1 | | GAT | | 4 GATE |
| 41 | TG | | TAG | A | 255 | 1 | | 1 | | | | 3 TAG |
| 42 | AT | | ATTEND-TAG | A | 256 | 1 | | 1 | | | | 3 ATT |
| 43 | TA | | SCHED-TAG | A | 257 | 1 | | 1 | | | | 5 S/TAG |
| 44 | PT | | PRINT-TAG | A | 258 | 1 | | 1 | | | | 3 PRT |
| 45 | P1 | | PRINT-TAG1 | A | 259 | 1 | | 1 | | | | 3 PT1 |
| 46 | TR | | TRANS-REQUESTS | A | 260 | 1 | | 1 | | | | 5 TRANS |
| 47 | XT | | EXTRA-EARLY-TRN | A | 261 | 1 | | 1 | | | | 3 X/T |
| 48 | GF | | GRAD-FOLOWUP | A | 262 | 1 | | 1 | | | | 9 GRD FLWUP |
| 49 | PP | | PRIV-PHONE | A | 263 | 1 | | 1 | | | | 7 PRI-TEL |
| 50 | PA | | PRIV-ADDR | A | 264 | 1 | | 1 | | | | 7 PRI-ADR |

CODE: STU FILE: STU TYPE: I2 TITLE: STUDENT MASTER FILE CODE: STU

QUAL: YYSSS GROUP: 03 RECORD: 945 BLOCK: 1 09/09/9

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| 54 | JD | | JR-PROB-USE-DT | N | 271 | 4 | | 1 | | | | 8 PRB-DATE |
| 55 | NG | | NON-GRAD | A | 275 | 1 | | 1 | | | | 3 N/G |
| 56 | XP | | EXPELLED | A | 276 | 1 | | 1 | | | | 3 EXP |
| 57 | RG | | RET-IN-GRADE | A | 277 | 1 | | 1 | | | | 3 R/G |
| 58 | SO | | RECLASS-TAG | A | 279 | 1 | | 1 | | | | 7 RECLASS |
| 59 | RB | | SARB | A | 279 | 1 | | 1 | | | | 4 SARB |
| 60 | EP | | EXT-PARTIAL | A | 280 | 1 | | 1 | | | | 11 EXT-PARTIAL |
| 61 | KT | | CONTRACT | A | 281 | 1 | | 1 | | | | 8 CONTRACT |
| 62 | SU | | SPEC-TAG-MISC | A | 282 | 1 | | 1 | | | | 3 SPT |
| 63 | SR | | SS-REASON | A | 283 | 1 | | 1 | | | | 3 SSR |
| 64 | GM | | GANG-MEMBER | A | 284 | 1 | | 1 | | | | 3 G/A |
| 65 | TF | | TAG-FILLER | A | 285 | 11 | | 1 | | | | 11 TG-FL |
| 66 | XZ | | AMNESTY-NO | A | 296 | 10 | | 1 | | | | 10 AMNESTY-NO |
| 67 | XX | | AMNESTY-PR-LC | A | 306 | 3 | | 1 | | | | 15 AMNESTY-PR-LC |
| 68 | US | | U-S-ENTRY-DATE | N | 309 | 6 | | 1 | 2 | | | 10 ENTRY-DATE |
| 69 | DE | | DATE-ENR | N | 315 | 6 | | 1 | 2 | | | 8 DATE-ENR |
| 70 | DL | | DATE-LEFT | N | 321 | 6 | | 1 | 2 | | | 9 DATE-LEFT |
| 71 | IC | | IMMUNE-COMP | N | 327 | 6 | | 1 | 2 | | | 8 IMM-CMP |
| 72 | ED | | ELEM-DIST | N | 333 | 2 | | 1 | | | | 6 E-DIST |
| 73 | TD | | ATTN-DIST | N | 335 | 1 | | 1 | | | | 2 AD |
| 74 | XW | | SKIP-ATTEND | A | 336 | 1 | | 1 | | | | 3 S/A |
| 75 | AZ | | AGE-ENROLL | A | 337 | 1 | | 1 | | | | 3 A/E |
| 76 | AR | | ATT-REPORTED | G | 339 | 10 | | 1 | | | | 10 ATT REPORT |
| 77 | AM | | ATT-RPT-MONTH | A | 338 | 1 | | 10 | | | | 3 A/R |
| 78 | LY | | LAST-YEAR-SCH | N | 348 | 2 | | 1 | | | | 3 L/Y |
| 79 | LS | | LAST-SCH | A | 350 | 2 | | 1 | | | SCH | 3 L/S |
| 80 | HS | | HIGH-SCH | N | 352 | 2 | | 1 | | | SIT | 2 HS |
| 81 | SS | | SUM-SCH | N | 354 | 2 | | 1 | | | | 2 SS |
| 82 | LH | | LANG-HOME | N | 356 | 2 | | 1 | | | HLC | 3 H/L |
| 83 | LW | | LANG-CORRESPOND | A | 358 | 1 | | 1 | | | | 2 LW |
| 84 | ES | | ESL-CODE | A | 359 | 1 | | 1 | | | | 3 ESL |
| 85 | DG | | ESL-DATES | G | 360 | 24 | | 1 | | | | 24 ESL-DATES |
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| 90 | R2 | | 180-DATE | N | 384 | 6 | | 1 | 2 | | | 8 180-DATE |
| 91 | CE | | CHAP1-READ-ENT | N | 390 | 6 | | 1 | 2 | | | 11 CHP1-RD-ENT |
| 92 | C2 | | CHAP1-READ | A | 396 | 1 | | 1 | | | | 4 C1-R |
| 93 | CX | | CHAP1-READ-DRP | N | 397 | 6 | | 1 | 2 | | | 11 CHP1-RD-DRP |
| 94 | ET | | CHAP1-ENG-ENT | N | 403 | 6 | | 1 | 2 | | | 12 CHP1-ENG-ENT |
| 95 | C3 | | CHAP1-ENG | A | 409 | 1 | | 1 | | | | 4 C1-E |
| 96 | DT | | CHAP1-ENG-DRP | N | 410 | 6 | | 1 | 2 | | | 12 CHP1-ENG-DRP |
| 97 | MD | | CHAP1-MATH-ENT | N | 416 | 6 | | 1 | 2 | | | 13 CHP1-MATH-ENT |
| 98 | C1 | | CHAP1-MATH | A | 422 | 1 | | 1 | | | | 4 C1-M |
| 99 | RD | | CHAP1-MATH-DRP | N | 423 | 6 | | 1 | 2 | | | 13 CHP1-MATH-DRP |
| 100 | RH | | CHP1-RD-HIS-ALL | G | 429 | 5 | | 1 | | | | 5 78901 |

A N A H E I M  U N I O N  H I G H  S C H O O L  D I S T R I C T

D A T A  D I C T I O N A R Y

CODE: STU FILE: STU TYPE: I2 TITLE: STUDENT MASTER FILE CODE: STU

QUAL: YYSSS GROUP: 03 RECORD: 947 BLOCK: 1 09/09/82

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| 104 | MH | | CHP1-MA-HIS-ALL | G | 439 | 5 | | 1 | | | | 5 78901 |
| 105 | HM | | CHP1-MATH-HIST | A | 439 | 1 | | 5 | | | | 1 M |
| 106 | XC | | CHP1-FILL | A | 444 | 26 | | 1 | | | | 26 FILLER |
| 107 | CZ | | COMP-MRE-GRAD | A | 470 | 1 | | 1 | | | | 5 MRE/G |
| 108 | CW | | COMP-CWS-GRAD | A | 471 | 1 | | 1 | | | | 5 CWS/G |
| 109 | CP | | COMP-CPE-GRAD | A | 472 | 1 | | 1 | | | | 5 CPE/G |
| 110 | CT | | COMP-TESTS | G | 473 | 6 | | 1 | | | | 6 MRLWC- |
| 111 | T# | | TEST | A | 473 | 1 | | 6 | | | | 3 PTP |
| 112 | TC | | TEST-COUNTERS | G | 479 | 6 | | 1 | | | | 9 TST-CTRS |
| 113 | K# | | CMP-TAKEN | N | 479 | 1 | | 6 | | | | 9 TST-TAKEN |
| 114 | CD | | COMP-DATES | G | 485 | 24 | | 1 | | | | 24 COMP-DATES |
| 115 | D# | | CMP-DATE | N | 485 | 4 | | 6 | | | | 6 CMP-DT |
| 116 | MS | | MISC | G | 509 | 9 | | 1 | | | | 9 MISC |
| 117 | M1 | | MISC-1 | A | 509 | 1 | | 1 | | | | 2 M1 |
| 118 | M2 | | MISC-2 | A | 510 | 1 | | 1 | | | | 2 M2 |
| 119 | M3 | | MISC-3 | A | 511 | 1 | | 1 | | | | 2 M3 |
| 120 | M4 | | MISC-4 | A | 512 | 1 | | 1 | | | | 2 M4 |
| 121 | M5 | | MISC-5 | A | 513 | 1 | | 1 | | | | 2 M5 |
| 122 | M6 | | MISC-6 | A | 514 | 1 | | 1 | | | | 2 M6 |
| 123 | M7 | | MISC-7 | A | 515 | 1 | | 1 | | | | 2 M7 |
| 124 | M8 | | MISC-8 | A | 516 | 1 | | 1 | | | | 2 M8 |
| 125 | M9 | | MISC-9 | A | 517 | 1 | | 1 | | | | 2 M9 |
| 126 | XY | | MSC-FILL | A | 518 | 12 | | 1 | | | | 12 FIL |
| 127 | PC | | PAR-CONF | N | 530 | 1 | | 1 | | | | 2 PC |
| 128 | PE | | PER-ABS | G | 531 | 14 | | 1 | | | | 15 PERIOD ABSENCES |
| 129 | A# | | ABS | N | 531 | 2 | | 7 | | | | 2 AB |
| 130 | NO | | NOTICES | G | 545 | 7 | | 1 | | | | 7 NOTICES |
| 131 | N# | | NOTICE | N | 545 | 1 | | 7 | | | | 2 NO |
| 132 | TY | | TARDIES | G | 552 | 14 | | 1 | | | | 14 TARDIES |
| 133 | L# | | TDY | N | 552 | 2 | | 7 | | | | 2 TD |
| 134 | CA | | CRED-ATT | N | 566 | 5 | 2 | 1 | | | | 6 ATTEMP |
| 135 | CC | | CRED-COMP | N | 571 | 5 | 2 | 1 | | | | 6 COMPLD |
| 136 | CG | | QTR-WT-CLASSES | N | 576 | 3 | | 1 | | | | 7 Q-WT/CL |
| 137 | QC | | QTR-CRED | N | 579 | 5 | 2 | 1 | | | | 6 QTR/CR |
| 138 | QG | | QTR-GPA | N | 584 | 3 | 2 | 1 | | | | 7 QTR-GPA |
| 139 | LQ | | LAST-QTR-GPA | N | 587 | 3 | 2 | 1 | | | | 5 LQGPA |
| 140 | LU | | LAST-QTR-CRED | N | 590 | 5 | 2 | 1 | | | | 6 LQCRED |
| 141 | GP | | GPA | N | 595 | 3 | 2 | 1 | | | | 7 9-12 AC |
| 142 | CR | | CLASS-RANK | N | 598 | 3 | | 1 | | | | 9 RANK(GP) |
| 143 | CS | | CLASS-SIZE | N | 601 | 3 | | 1 | | | | 4 SIZE |
| 144 | GT | | GPA-TOP | N | 604 | 3 | 2 | 1 | | | | 8 10-12 AC |
| 145 | RT | | RANK-TOP | N | 607 | 3 | | 1 | | | | 12 RANK-TOP(GT) |
| 146 | TO | | TOT-GPA | N | 610 | 3 | 2 | 1 | | | | 8 TOT 9-12 |
| 147 | KD | | GRD-D-F-CTR | N | 613 | 1 | | 1 | | | | 4 G-DF |
| 148 | KF | | GRADE-F-CTR | N | 614 | 1 | | 1 | | | | 4 G-F |
| 149 | HD | | HIS-D-F-CTR | N | 615 | 2 | | 1 | | | | 4 H-DF |
| 150 | HF | | HISTORY-F-CTR | N | 617 | 2 | | 1 | | | | 3 H-F |

ANAHEIM UNION HIGH SCHOOL DISTRICT

DATA DICTIONARY

CODE: STU FILE: STU TYPE: I2 TITLE: STUDENT MASTER FILE CODE: STU

QUAL: YYSSS GROUP: 03 RECORD: 949 BLOCK: 1 09/09/92

| SEQ | CODE | KEY | DATA-ITEM-NAME | TYPE | POSN | LEN | DP | OC | SQ | ALT | O/S | OUTPUT-HEADING |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 151 | SA | | HIS-WT-CLASSES | N | 619 | 3 | | | 1 | | | 7 H-WT/CL |
| 152 | SB | | ECA-GPA | N | 622 | 3 | 2 | | 1 | | | 6 ECA |
| 153 | SC | | ECA-GP-CRED | N | 625 | 5 | 2 | | 1 | | | 11 ECA-CR-PASS |
| 154 | SD | | ECA-NUM-CLS | N | 630 | 2 | | | 1 | | | 12 ECA-CLS-PASS |
| 155 | SE | | HNR-GRAD-FLG | A | 632 | 1 | | | 1 | | | 7 HNR-FLG |
| 156 | SF | | HNR-GRAD-GPA | N | 633 | 3 | 2 | | 1 | | | 7 HNR-GPA |
| 157 | UA | | NON-WT-GPA | N | 636 | 3 | 2 | | 1 | | | 11 NW-9-12-ACA |
| 158 | UB | | NON-WT-CLS-RNK | N | 639 | 3 | | | 1 | | | 15 NW-CLS-RNK (UA) |
| 159 | UC | | NON-WT-CLS-SIZE | N | 642 | 3 | | | 1 | | | 11 NW-CLS-SIZE |
| 160 | UD | | NON-WT-GPA-TOP | N | 645 | 3 | 2 | | 1 | | | 16 NW-GPA-10-12-ACA |
| 161 | UE | | NON-WT-RNK-TOP | N | 649 | 3 | | | 1 | | | 15 NW-RNK-TOP (UD) |
| 162 | UF | | NON-WT-TOT-GPA | N | 651 | 3 | 2 | | 1 | | | 12 NW-TOTAL-GPA |
| 163 | AA | | ALT-ADRESS-APT | G | 654 | 34 | | | 1 | | | 34 ALT-ADDRESS-APT |
| 164 | AB | | ALT-ADDRESS-ST | A | 654 | 24 | | | 1 | | | 24 ALT STREET ADDRESS |
| 165 | AC | | ALT-APT | A | 678 | 10 | | | 1 | | | 10 ALT APT # |
| 166 | AE | | ALT-CITY | A | 689 | 15 | | | 1 | | | 15 ALT CITY |
| 167 | AF | | ALT-ZIP-PLUS-4 | G | 703 | 9 | | | 1 | | | 9 ALT ZIP+4 |
| 168 | AH | | ALT-ZIP-CODE | N | 703 | 5 | | | 1 | | | 7 ALT ZIP |
| 169 | AI | | ALT-ZIP-SUFFIX | N | 708 | 4 | | | 1 | | | 7 ALT Z/S |
| 170 | AK | | AKA-NAME | G | 712 | 24 | | | 1 | 4 | | 24 AKA-NAME |
| 171 | KL | | AKA-LAST-NAME | A | 712 | 13 | | | 1 | | | 13 AKA-LAST-NAME |
| 172 | KR | | AKA-FIRST-NAME | A | 725 | 10 | | | 1 | | | 10 AKA-FIRST-NAME |
| 173 | KM | | AKA-FILL | A | 735 | 1 | | | 1 | | | 7 AKA/FILL |
| 174 | TX | | TEACHER-ELEM | A | 736 | 16 | | | 1 | | | 16 TEACHER-ELEM |
| 175 | OF | | OTH-FILL | A | 752 | 48 | | | 1 | | | 49 OTH-FILL |
| 176 | LX | | LINKAGES | G | 800 | 144 | | | 1 | | | 144 LINKAGES |
| 177 | UK | | ATH-LINK | L | 800 | 8 | | | 1 | ATH | | 9 ATH-LK |
| 178 | AL | | ATTEND-LINK | L | 808 | 8 | | | 1 | ATT | | 8 ATT-LK |
| 179 | LC | | CMP-LINK | L | 816 | 8 | | | 1 | CMP | | 8 CMP-LK |
| 180 | CO | | COM-LINK | L | 824 | 8 | | | 1 | COM | | 8 COM-LK |
| 181 | UZ | | DCP-LINK | L | 832 | 8 | | | 1 | DCP | | 8 DCP-LK |
| 182 | EL | | ECA-LINK | L | 840 | 8 | | | 1 | ECA | | 9 ECA-LK |
| 183 | GL | | GLINK | N | 848 | 8 | | | 1 | GRD | | 9 GRD-LK |
| 184 | HL | | HLINK | L | 856 | 8 | | | 1 | HIS | | 9 HIS-LK |
| 185 | TH | | THLINK | L | 864 | 8 | | | 1 | HST | | 8 HST-LK |
| 186 | LA | | IMM-LINK | L | 872 | 8 | | | 1 | IMM | | 8 IMM-LK |
| 187 | RL | | RLINK | L | 880 | 8 | | | 1 | PAR | | 8 PAR-LK |
| 188 | UX | | PRG-LINK | N | 888 | 8 | | | 1 | PRG | | 8 PRG-LK |
| 189 | LR | | REF-LINK | L | 896 | 8 | | | 1 | REF | | 8 REF-LK |
| 190 | XL | | SAT-LINK | L | 904 | 8 | | | 1 | SAT | | 8 SAT-LK |
| 191 | CM | | SFR-LINK | L | 912 | 8 | | | 1 | SFR | | 8 SFR-LK |
| 192 | LI | | SPS-LINK | L | 920 | 8 | | | 1 | SPS | | 8 SPS-LK |
| 193 | SL | | SCHED-LINK | L | 928 | 8 | | | 1 | SSS | | 8 SSS-LK |
| 194 | UL | | URM-LINK | L | 936 | 8 | | | 1 | URM | | 8 URM-LK |

# ANAHEIM UNION HIGH SCHOOL DISTRICT

## DATA DICTIONARY

CODE: HST FILE: HST TYPE: S1 TITLE: STUDENT TEST HISTORY CODE: HST

QUAL: YYSSS GROUP: 12 RECORD: 122 BLOCK: 14 09/04/92

| SEQ | CODE | KEY | DATA-ITEM-NAME | TYPE | POSN | LEN | DP | OC | ED | ALT | O/S | OUTPUT-HEADING |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SN | 1 | NUMBER | N | 15 | 6 | | 1 | 9 | STU | 6 | STU-NO |
| 2 | GR | | GRADE | N | 21 | 2 | | 1 | | | 2 | GR |
| 3 | SC | | SCHOOL | N | 23 | 2 | | 1 | | LOC | 4 | SCHL |
| 4 | YR | | YEAR | N | 25 | 2 | | 1 | | | 4 | YEAR |
| 5 | MO | | MONTH | N | 27 | 2 | | 1 | | | 5 | MONTH |
| 6 | TE | | TEST | A | 29 | 4 | | 1 | | | 4 | TEST |
| 7 | RG | | READ-GE | N | 33 | 3 | 1 | 1 | | | 7 | READ-GE |
| 8 | MG | | MATH-GE | N | 36 | 3 | 1 | 1 | | | 7 | MATH-GE |
| 9 | LG | | LANG-GE | N | 39 | 3 | 1 | 1 | | | 7 | LANG-GE |
| 10 | RP | | READ-PC | N | 42 | 2 | | 1 | | | 7 | READ-PC |
| 11 | MP | | MATH-PC | N | 44 | 2 | | 1 | | | 7 | MATH-PC |
| 12 | LP | | LANG-PC | N | 46 | 2 | | 1 | | | 7 | LANG-PC |
| 13 | RT | | READ-ST | N | 48 | 1 | | 1 | | | 7 | READ-ST |
| 14 | MT | | MATH-ST | N | 49 | 1 | | 1 | | | 7 | MATH-ST |
| 15 | LT | | LANG-ST | N | 50 | 1 | | 1 | | | 7 | LANG-ST |
| 16 | RS | | READ-SS | N | 51 | 3 | | 1 | | | 7 | READ-SS |
| 17 | MS | | MATH-SS | N | 54 | 3 | | 1 | | | 7 | MATH-SS |
| 18 | LS | | LANG-SS | N | 57 | 3 | | 1 | | | 7 | LANG-SS |
| 19 | RR | | READ-RS | N | 60 | 3 | | 1 | | | 7 | READ-RS |
| 20 | MR | | MATH-RS | N | 63 | 3 | | 1 | | | 7 | MATH-RS |
| 21 | LR | | LANG-RS | N | 66 | 3 | | 1 | | | 7 | LANG-RS |
| 22 | RC | | READ-CE | N | 69 | 3 | | 1 | | | 7 | READ-CE |
| 23 | MC | | MATH-CE | N | 72 | 3 | | 1 | | | 7 | MATH-CE |
| 24 | LC | | LANG-CE | N | 75 | 3 | | 1 | | | 7 | LANG-CE |
| 25 | VO | | VOCAB | N | 78 | 3 | | 1 | | | 3 | VOC |
| 26 | CO | | COMP | N | 81 | 3 | | 1 | | | 3 | CMP |
| 27 | SP | | SPELL | N | 84 | 3 | | 1 | | | 3 | SPL |
| 28 | LM | | LANG-MECH | N | 87 | 3 | | 1 | | | 3 | LGM |
| 29 | LE | | LANG-EXP | N | 90 | 3 | | 1 | | | 3 | LGE |
| 30 | MA | | MATH-COMP | N | 93 | 3 | | 1 | | | 3 | MTC |
| 31 | MB | | MATH-C-A | N | 96 | 3 | | 1 | | | 3 | MTA |
| 32 | RE | | REF-SKILL | N | 99 | 3 | | 1 | | | 3 | RSK |
| 33 | SI | | SCIENCE | N | 102 | 3 | | 1 | | | 3 | SCI |
| 34 | SO | | SOC-STDY | N | 105 | 3 | | 1 | | | 3 | S/S |
| 35 | EL | | ESL | A | 108 | 1 | | 1 | | | 3 | ESL |
| 36 | XX | | RESERVE-SPACE | A | 109 | 14 | | 1 | | | 14 | RESERVE |

## THE DATA DICTIONARY

Each Data Base within the Data Base Management System contains various data elements, or items of information, such as name, address, city, zip code, etc. The user of the QUERY program should have available to them a list of the data elements within the data bases into which they are inquiring.

The data dictionary listing shows each item within the data base, with the mnemonic code assigned to it for use with the QUERY program. The list also shows the data element size, type, decimal positions, etc. Shown below is a sample of a data dictionary listing for a student data base. This will be referred to in the examples which follow in this manual.

The data dictionary listing shows each data element defined in the data base. The "CODE" is the mnemonic code which is required by the QUERY statement. The "TYPE" denotes the type of data that element contains. "A" stands for alpha-numeric data. "N" denotes data which is strictly numeric, and which may or may not contain decimal positions. "M" denotes data which is a monetary value, which may have decimal positions, and which may be a negative amount. "G" stands for a "group" item, an example of which is the name area. This is further broken down into last name, first name, and the middle initial. The data element may be referenced either as a group item,("NM") or individually ("LN", "FN", and "MI").

The "CLASSES" item is also a group item, which is further broken down into section numbers. This is an example of an "array", or items which are repeated several times. These may be referred to individually or all at once. For example, "S#" refers to any one of the fifteen section numbers. Or a specific item may be designated by giving the occurrence number, such as "S# (12)".

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D A T A  B A S E  M A N A G E M E N T  S Y S T E M

D A T A  D I C T I O N A R Y

CODE: STU  FILE: STU  TYPE: I2  TITLE: STUDENT MASTER FILE

QUAL: YSS  GROUP: 03  RECORD: 504  BLOCK: 6

| SEQ | CODE | DATA-ITEM-NAME | TYPE | POSN | LEN | DP | OC | ED | ALT | O/S | OUTPUT-HEADING..... |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SN | NUMBER | A | 1 | 6 | | 1 | | | 6 | STU-NO |
| 2 | NM | NAME | G | 7 | 24 | | 1 | 4 | | 24 | STUDENT-NAME |
| 3 | LN | LAST-NAME | A | 7 | 13 | | 1 | | | 13 | LAST NAME |
| 4 | FN | FIRST-NAME | A | 20 | 10 | | 1 | | | 10 | FIRST NAME |
| 5 | MI | MI | A | 30 | 1 | | 1 | | | 3 | M/I |
| 6 | SX | SEX | A | 31 | 1 | | 1 | | | 3 | SEX |
| 7 | GR | GRADE | N | 32 | 2 | | 1 | | | 3 | GRD |
| 8 | BD | BIRTHDATE | N | 34 | 6 | | 1 | 2 | | 9 | BIRTHDATE |
| 9 | PN | PARENT-NAME | A | 40 | 24 | | 1 | | | 24 | PARENT NAME |
| 10 | AD | ADDRESS | A | 64 | 24 | | 1 | | | 24 | STREET ADDRESS |
| 11 | CY | CITY | A | 88 | 18 | | 1 | | | 18 | CITY |
| 12 | ZC | ZIP-CODE | N | 106 | 5 | | 1 | | | 5 | ZIPCD |
| 13 | TL | TELEPHONE | N | 111 | 7 | | 1 | 3 | | 9 | TELEPHONE |
| 14 | CL | CLASSES | G | 118 | 45 | | 1 | | | 45 | CLASS SCHEDULE |
| 15 | S# | SECTION | N | 118 | 3 | | 15 | | MST | 3 | SEC |

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APPENDIX D

ANAHEIM UNION HIGH SCHOOL DISTRICT

**INCIDENT REPORT SYSTEM**

INCIDENT CATEGORIES
9/12/90

Item numbers 1-17 are to be reported on the form # SSCR-89

| MAJOR CATEGORY | SUBCATEGORY |
|---|---|
| ASSAULT AND BATTERY OFFENSES... | |
| ASSAULT,1 | 1. against student<br>2. against certificated employee<br>3. against classified employee<br>4. against others |
| ASSAULT WITH A DEADLY WEAPON,3 | 1. against student<br>2. against certificated employee<br>3. against classified employee<br>4. against others |
| BATTERY,2 | 1. against student<br>2. against certificated employee<br>3. against others |
| CHEMICAL SUBSTANCE OFFENSES... | |
| ALCOHOL,9 | 1. use<br>2. possession<br>3. sale/distribution<br>4. overdose<br>5. found<br>6. suspicion |
| MARIJUANA,10 (9) | 1. use<br>2. possession<br>3. sale/distribution<br>4. overdose<br>5. found<br>6. suspicion |
| OTHER DRUGS,11 (9) | 1. use<br>2. possession<br>3. sale/distribution<br>4. overdose<br>5. found<br>6. suspicion |
| PARAPHERNALIA,12 (9) | 1. use<br>2. possession<br>3. sale/distribution<br>5. found<br>6. suspicion |
| CLASS CUTTING,41 | |
| DEFIANCE OF AUTHORITY,48 | |
| DISORDERLY CONDUCT,54 | 1. involving student<br>2. involving outsider |
| DISRESPECT,44 | |
| DISRUPTION,46 | |
| DESTRUCTIVE DEVICES,14 (11) | 1. bombs<br>2. explosives<br>3. fireworks<br>4. bomb threats |
| EXTORTION,8 | 1. actual<br>2. attempted |
| FAILURE TO SERVE SATURDAY WORK STUDY,50 | 1. general<br>2. teacher assigned<br>3. admin assigned |

INCIDENT CATEGORIES
9/12/90
Item numbers 1-17 are to be reported on the form # SSCR-89

| MAJOR CATEGORY | SUBCATEGORY |
|---|---|
| FAILURE TO SERVE DETENTION,49 | 1. general<br>2. teacher assigned<br>3. admin assigned |
| FIGHTING OFFENSES... | |
| AGGRESSION/NON-SUSPENSION,47 | 1. against student<br>4. threatened individual<br>5. threats |
| FIGHTING-UNLAWFUL,4 | |
| FORGERY,20 | |
| HARASSMENT,62 | 1. against student<br>2. none |
| HOMICIDE,5 | |
| INSUBORDINATION,45 | 1. general<br>2. failure to serve teacher detention<br>3. failure to serve admin detention |
| LOITERING/TRESPASSING,16 (13) | 1. suspended student<br>2. outsider |
| MISCELLANEOUS,17 (14) | 1. kidnaping<br>2. gambling<br>4. other |
| OFF CAMPUS,65 | |
| PROFANITY/VULGARITY,53 | 1. against staff<br>2. against other |
| PROPERTY CRIMES,15 (12) | 1. arson<br>2. burglary<br>3. theft of school property<br>4. theft of student property<br>5. theft of employee property<br>6. vandalism of school property<br>7. vandalism of student property<br>8. vandalism of employee property |
| ROBBERY,7 | 1. actual<br>2. attempted |
| SEX OFFENSES,6 | 1. misdemeanors<br>2. felony |
| TARDINESS,42 | |
| THREATS/INTIMIDATION,52 | |
| THROWING OBJECTS,51 | |
| TOBACCO (SMOKING),61 | 1. use<br>2. possession |
| TRUANCY,63 | |
| VEHICLE COMPLAINT,70 | 1. student's vehicle<br>2. staff's vehicle<br>3. other |
| WEAPONS (POSSESSION),13 (10) | 1. guns<br>2. guns (replicas)<br>3. knives<br>4. knives (replicas)<br>5. other weapons<br>6. other weapons (replicas) |

## DISPOSITION CODES

| CODE | MEANING..... |
|---|---|
| 6 | TEACHER/STUDENT CONFERENCE |
| 8 | TEACHER/STUDENT/ADMINISTRATOR CONFERENCE |
| 10 | TEACHER/STUDENT/PARENT CONFERENCE |
| 12 | TEACHER/PARENT CONFERENCE |
| 14 | TEACHER/PARENT TELEPHONE CONFERENCE/LETTER |
| 16 | WARNING TO STUDENT AND/OR PARENT |
| 18 | CONTRACT WITH STUDENT |
| 20 | ADMINISTRATOR/STUDENT CONFERENCE |
| 22 | ADMINISTRATOR/STUDENT/PARENT/TEACHER CONFERENCE |
| 24 | ADMINISTRATOR/PARENT/STUDENT CONFERENCE |
| 26 | ADMIN/STUDNT/TEACHER TELEPHONE CONF/LETTE |
| 27 | ADMINISTRATOR/PARENT CONFERENCE |
| 29 | COUNSELOR/PARENT CONFERENCE |
| 30 | COUNSELOR/STUDENT CONFERENCE |
| 32 | COUNSELOR/STUDENT/PARENT/TEACHER CONFERENCE |
| 34 | COUNSELOR/PARENT/STUDENT CONFERENCE |
| 36 | COUNSELOR/STU/PARNT/TEACHER TELEPHONE CONF/LETTR |
| 40 | COLLECTION OF INAPPROPRIATE PERSONAL PROPERTY |
| 42 | DETENTION |
| 44 | EXCLUSION FROM EXTRACURRICULAR ACTIVITIES |
| 46 | FINANCIAL/SERVICE SETTLEMENT |
| 48 | IN-SCHOOL SUSPENSION |
| 50 | SATURDAY SCHOOL |
| 52 | WORK STUDY |
| 54 | FAILURE TO SERVE WORK STUDY |
| 60 | REFERRAL TO CONFLICT MANAGEMENT |
| 61 | REFERRAL TO COUNSELOR |
| 62 | REFERRAL TO LOCAL SCHOOL PLACEMENT COMMITTEE |
| 63 | REFERRAL TO OUTSIDE COUNSELING AGENCY |
| 64 | REFERRAL TO SCHOOL PSYCHOLOGIST |
| 65 | REFERRAL TO SOCIAL WORKER |
| 66 | REFERRAL TO STUDENT INTERVENTION TEAM (SIT) |
| 67 | REFERRAL TO PROBATION OFFICER |
| 68 | REFERRAL TO CHILD ABUSE REGISTRY |
| 70 | SUSPENSION 1/2 DAY OR LESS |
| 71 | SUSPENSION 1 DAY |
| 72 | SUSPENSION 2 DAYS |
| 73 | SUSPENSION 3 DAYS |
| 74 | SUSPENSION 4 DAYS |
| 75 | SUSPENSION 5 DAYS |
| 76 | SUSPENSION 5 DAYS PENDING EXPULSION |
| 80 | REFERRAL TO SARB |
| 85 | EXPULSION |
| 86 | DROP SCHOOL |
| 89 | RUNAWAY |
| 90 | CHANGE IN STUDENT'S SCHEDULE |
| 91 | DROP CLASS |
| 92 | INTER SCHOOL TRANSFER |
| 93 | TRANSFER OUT OF DISTRICT |
| 94 | REFERRAL TO ALTERNATIVE EDUCATION |
| 95 | INTER SCHOOL TRANSFER REVOKED |
| 96 | REFERRAL TO FIRE MARSHALL |
| 98 | POLICE REFERRAL |
| 99 | OTHER |

ANAHEIM UNION HIGH SCHOOL DISTRICT
INCIDENT REPORTING SYSTEM
GANG/GROUP CODES
9/23/91

| CODE | NAME |
|---|---|
| 20 | ANAHEIM HOOD - AHR |
| 30 | ANAHEIM INSANE CHICANOS - AIC |
| 40 | ANAHEIM TRAVELERS CITY - ATC |
| 60 | ANAHEIM JUNGLE CITY - AJC |
| 80 | ANAHEIM VATOS LOCOS - AVLS |
| 100 | ANARCY - A |
| 110 | ARTAS 190'S - ART/ARTAS |
| 120 | ARYAN YOUTH MOVEMENT |
| 130 | BAKER STREET - BST |
| 135 | BALSAM ST POSSEE - BSP/BSLM |
| 140 | BARRIO NUMERO UNO - B#1/V#1 |
| 145 | BARRIO SMALL TOWN - BST |
| 150 | BENMORE LOCOS |
| 155 | BERRY STREET - B-ST |
| 160 | BIG STANTON/STANTONE - STN 13 |
| 170 | BOYS FOR THE HOOD - BTH |
| 200 | BUENA PARK WARRIORS - BPWR |
| 210 | CAB CREW - CAB |
| 220 | CALLE JEFFREY FUTUROS - CJF |
| 225 | CALLE JEFFREY LOCOS - CJL |
| 230 | CALLE LYNN GANGSTERS - CLG |
| 235 | CAMBRIDGE STREET - C-ST |
| 250 | CHIVAS |
| 260 | CITRON STREET BADBOYS - CST |
| 280 | COMPTON VARRIO SEGUNDO - CVS |
| 300 | CROW VILLAGE - CV |
| 310 | C-STREET - CLEMENTINE/C-ST |
| 320 | EAST SIDE ANAHEIM - ESA |
| 340 | EASTSIDE BUENA PARK - ESBP |
| 343 | EAST SIDE BUENA PK LOCOS - ESBP |
| 347 | ECHO BOYS - ESB |
| 350 | EIGHTEENTH STREET - XVIII |
| 353 | FAMILIES OF LATIN KINGS - FOLKS |
| 357 | F TROOP |
| 360 | FULLERTON TOKERTOWN - FTT |
| 380 | G.T.A. BOYS (GRAND THEFT AUTO) |
| 390 | HAVAIIAN GARDENS - VHG |
| 400 | HOODLUM CRIP BOYS - HCB |
| 410 | HOLDER STREET - HST |
| 415 | INSAINS - IST |
| 420 | INSANE CRIPS |
| 430 | KROEGER STREET - KST |

| CODE | NAME |
|---|---|
| 435 | L.A. DEATH SQUAD - S.S. LADS |
| 440 | LA COLONIA INDEPENDENCIA-VLCR |
| 447 | LA JOLLA - VLJR |
| 452 | LA PLAYGIRLS |
| 460 | LA PLAYBOYZ |
| 470 | LITTLE HOOD CRIPS - LHC |
| 480 | LITTLE STANTON - LSTN |
| 500 | LOS COYOTES - VLCR |
| 560 | MILLIONS OF DEAD COPS - MDC |
| 580 | MOHAWK BOYS |
| 600 | NEW ROMANTICS |
| 620 | NINTH STREET - 9ST |
| 640 | NIP 14 |
| 660 | OPTIONAL BOYZ |
| 664 | OPTIONAL EXPRESS GANG - OES |
| 665 | OPTIONAL GANG LOCOS - OGL |
| 667 | PACIFIC STREET GANG - PSG |
| 670 | PARK VILLAGE CRIP - PVC |
| 673 | PAULINE STREET GANG - PSG |
| 677 | PINE STREET LOPERS |
| 680 | PENGUIN CITY - APC |
| 700 | PUNK ROCKERS/PUNKERS |
| 720 | ROYAL SAMOAN PEOPLE - RSP |
| 740 | SAMOAN CRIPS |
| 760 | SATANAS GANG |
| 780 | SATISFACTION LOVERS |
| 800 | SKINHEADS |
| 820 | SONS OF SAMOA - SOS |
| 840 | THE BROTHERHOOD - TBH |
| 860 | TOTAL PLEASURE BOYZ - TPB |
| 865 | TOTAL PLEASURE GIRLS - TPG |
| 870 | UNDERHILL STREET GANG - USG |
| 873 | VARRIO LA MIRADA - VLM |
| 877 | VARRIO NORWALK - VNLK |
| 880 | VIET CHING |
| 900 | WAH CHING |
| 920 | WESTSIDE ANAHEIM - WSA |
| 930 | WEST SIDE LA HABRA - WSLH |
| 940 | WHITE ARYAN RESISTANCE - WAR |
| 960 | YOUTH FOR THE HOOD - YFTH |
| 999 | OTHER |

# APPENDIX E

## ANAHEIM UNION HIGH SCHOOL DISTRICT

## QUERY: INQUIRY PROGRAM

# Q U E R Y

## DATA BASE MANAGEMENT SYSTEM INQUIRY PROGRAM

QUERY is the name of a general purpose data base inquiry program for use with Data Base Management System / 80. QUERY is easily learned, yet can produce many varied types of output from one or two related data bases.

QUERY accepts input statements in the form "LIST STU NM AD CY IF SX = G". This statement means "LIST data from the STUdent file, showing the name (NM), address (AD), and city (CY), IF the student's sex (SX) code is "G".

The first word in each QUERY statement is a command denoting the type of access desired. These include the words "LIST", "TOTAL", "SKIP", "STOP" and others. The next word is usually a three letter code denoting a particular data base (or file), such as "STU" for the STUdent Data Base.

Data elements within a data base, such as name, address, and city, are given two character mnemonic codes, which are easy to remember and quickly typed into a QUERY input statement. "NM" means "name", "AD" means "address", etc.

QUERY statements may include conditional phrases such as "IF SX = G". The word "IF" signals the beginning of a condition which must be met before any data is displayed from the data base. Conditions may be more complex, and may include "AND" and "OR" to further limit the output. These are all explained in more detail later on.

The user may also obtain the output in various sequences if desired. All data bases have a natural output sequence, which is normally the default output sequence. For example, the Student Data Base would normally be displayed in order by student name. But the user may obtain the output in some other order by use of the "BY" function. "LIST STU NM AD CY ZC BY ZC" would list the student data in order BY zip code (ZC).

The "TOTAL" command is used to obtain a total number of records which meet given a condition, rather than listing each record. For example "TOTAL STU" would merely count all the records in the Student Data Base, and display the total. Some data elements may also be totaled assuming they contain numeric data. For example, "TOTAL MST ST" might be used to display the total students in the Master Schedule File.

If the user frequently wishes to skip over the same group of records, the "SKIP" command may be used. "SKIP STU IF SX = B" would exclude all students whose sex is "B" from all further inquiry statements. Additional "SKIP" commands may also be given. The command "RESET" is used to again include all records in subsequent searches.

QUERY output may be formatted for a CRT display terminal using the "TYPE" command (rather than "LIST"). Or, it may be placed into a file for later printing using the "PRINT" command.

## QUERY COMMANDS

The following are "commands" which are used as the first word in any QUERY statement. Every QUERY statement must start with one of the following words:

LIST: This command requests that some data be printed on the user's hard-copy terminal. Up to 132 characters may be printed on each line of the listing. If no data elements within the data base are specified to be listed, the output will contain as many of the data elements in each record as will fit on one line of output. These will be the first items shown on the data dictionary list; usually the more important items such as name, address, city, etc.

TYPE: This command is similar to "LIST", except the output is limited to 80 characters per line, and is intended for display on a CRT display terminal. Again, automatic display of some data will occur if no data elements are given to be displayed.

PRINT: This command is exactly like "LIST", except the output listing is not shown on the user's terminal, but placed into a temporary data file. The file name is displayed on the user's terminal, and will be in the form "P1234.LST". This file may then be directed to the high-speed printer in the data center for output, or typed on the user's terminal after ending the QUERY program.

SAVE: This is similar to "PRINT", except no printer control symbols are in the output file. This file may then be used as a data file for use with a text editor or other programs.

TOTAL: This command is used to search a data base, and at the end, display one line of data. This line will contain the total records found. It may optionally display the total value contained in one or more data elements. For example, a budgetary file might be searched, and the total appropriation displayed using "TOTAL BGT AP".

SKIP: This command is used to bypass certain data records during subsequent inquiries into the same data base. It may be used more than once. An example might be "SKIP STU IF GR = 12". This would cause all records for students who are in grade 12 (GR = 12) to be bypassed during all subsequent QUERY operations. To stop the bypassing records, the RESET command is used.

KEEP: This is the opposite of "SKIP". All records which do NOT meet the conditions entered are skipped over. For example, "SKIP IF GR # 12" would skip all students who are not in grade twelve. All following operations would automatically bypass those students. More than one "KEEP" and/or "SKIP" may be used to further limit the output. After each "KEEP" or "SKIP", the program will display the number of data records being skipped, and the total remaining.

SAMPLE: This command is similar to "KEEP", except it "keeps" a truly random sample of the records in the file referenced. Either a specific number of records may be kept, or a percentage of all the records kept. To obtain 100 student records for a sample, enter "SAMPLE STU 100. Or to keep 2% of the records, enter "SAMPLE STU .02".

RESET: This command restores the QUERY searches to again include all the data records in subsequent operations.

TITLE: This command is followed by a title which will appear as the heading at the top of all output from "LIST"and"PRINT" statements. This will replace the normal heading generated by QUERY. The title entered will be "expanded"; one space will be inserted between each letter.
For example; "TITLE STUDENT ADDRESS LIST" would create a title like:
" S T U D E N T  A D D R E S S  L I S T "
If nothing is entered after "TITLE", the normal headings are used.

SUBTITLE: Similar to "TITLE", except it appears under the heading as a subtitle, and is not expanded. If nothing is entered, no subtitles are printed.

SEE: This command is used to refer the program to a file in which there are QUERY statements. The file name is "QUERY.TXT". This file contains one or more valid QUERY statements. The "SEE" command will be followed by a line number in the text file; ie: "SEE 100". This statement means look in the file "QUERY.TXT" and takes the statement at line number 100. The "SEE" command may also include a range of line numbers such as "SEE 100 THRU 600".

DISP: This command displays all line numbers and query statements stored in "QUERY.TXT" file.

DITTO: This command means to use the last statement again. The "IF" portion of the statement may be changed, and it follows the command "DITTO". For example, "DITTO IF GR = 12". The portion of the last statement which preceded the "IF" would be repeated automatically.

SPACE: This command allows the user to change the vertical spacing of the output from the normal single spacing, to double or triple spacing. The command is followed by a number from 1 through 9. Thereafter, all output will be printed at that vertical spacing.

STOP: This command or "END" will cause the program to terminate.

The above "commands" are the only allowable words which may start a QUERY statement. Each QUERY statement must contain one, and only one of these words.

The second word in a QUERY statement must be the data base code, such as "STU" for the Student Data Base. However, once one QUERY command has been given referencing a particular data base, subsequent commands need not again contain the data base code. Thus a command such as "LIST" alone would generate a listing if it had been preceded by a command which did include a data base code.

The following are examples of valid QUERY statements:

```
LIST STU                          (List data from the STUdent data base)
LIST                              ("STU" is implied from the preceding)
TOTAL                             (TOTAL the records in the same data base)
PRINT STU NM AD CY                (PRINT name, address and city)
TYPE STU NM GR                    (Display student name and grade on CRT)
SKIP IF GR = 12                   (Bypass student records for 12th graders)
RESET                             (Do not bypass any records)
STOP                              (End the QUERY program)
SPACE 2                           (Double space the output from now on)
SAMPLE .20                        (Keep 20% of the records for a sampling)
TITLE "SPECIAL REPORT TO BOARD"   (Create a new title for printed output)
SUBTITLE "GRADUATING SENIORS"     (Create sub-title for printed output)
```

APPENDIX F

ANAHEIM UNION HIGH SCHOOL DISTRICT

**CLASSES OFFERED ON SYSTEM**

Class 101 - Basic Introduction to the Computer System will cover:
A. How to use the terminal/keyboard and how to login.
B. The computer network structure.
C. The basics of how to send and receive mail.

Class 110 - General Overview of the Student Accounting System Intended for personnel new to a position invloved with student information/records. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.
The class will review many of the programs used to maintain student records and focus on the associated basic concepts. Recommended for personnel new to postions such as Assistant Principals, Secretary Clerks and Attendance Clerks.

Class 120 - Overview of the Programs Used in Registration (enrolling students and master schedule maintenance), Progress Reports, and Grading. This class is intended as a review for personnel with responsibility for and a working knowledge of student registration, master schedule, and progress/grade reports. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.

Class 130 - Overview of the Programs Used to Maintain Transcript Data and Monitor Graduation Requirements. This class is intended as a review for personnel with responsibility for and a working knowledge of student transcript data and graduation requirments. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.

Class 140 - Overview of the Programs Used in Attendance Accounting. This class is intended as a review for personnel with responsibility for and a working knowledge of student attendance accounting. The first half of each session will cover the programs related to monthly attendance reporting and the second half will focus on period attendance accounting. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.

Class 150 - Overview of the REVISED Student Scheduler and Related Programs. The class is intended to review and/or introduce personnel (such as Assistant Principals, Counselors, and Secretary Clerks) to the use of the computer for scheduling students. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.

Class 210 - Inroduction to Query (as REVISED for the VAX computer). The class will cover the basic concepts using student data as an example. More advanced concepts will be covered depending upon the time available and class interest. You must know how to login and have a general knowledge of the topics covered in class 101 before signing up for this class.

Class 230 - How to create personalized letters using DBMLTR. The class will cover how to create text for the letters within All-In-1, move the file to a VMS directory and process the letters using DBMLTR. You must be using both All-In-1 and QUERY at least occasionally and understand the concepts covered in Class 210 and 312 as a prerequisite for this class.

Class 312 - Basic Word Processing will be an introduction to All-In-1 for those who have never used word processing. The concepts covered in Class 101 are a prerequisite for Class 312. You must know how to login and be able to send/receive mail before signing up for this class. The class will cover:

A. How to create and edit a document.
B. How to move within a document.
C. How to bold and underline.
D. How to cut and paste.

Class 320 - How to access district policies and documents on the new computer system. This class is designed for all school and district secretaries who will need access to the documents stored within the computer. You must be using All-In-1 at least occasionally and understand the concepts covered in class 312 as a prerequisite for this class.

Class 345 - Intermediate Word Processing will assume you have a knowledge of basic word processing using All-In-1 and will cover:

A. Use of rulers within a document.
B. Use of the print menus for printing documents.
D. Locating/searching for documents previously created.
E. Use of the secondary menu options.

You must be using All-In-1 at least occasionally and understand the concepts covered in class 312 as a prerequisite for this class.

Class 360 - Advanced Word Processing will cover:

A. How to create/use columns in documents.
B. Use of list processing.
C. How to create and use library documents.
D. How to create and use abbreviations.

A good working knowledge of All-In-1 and the concepts of class 345 are a prerequisite for this class.

Class 390 - A comprehensive review of All-In-1 with emphasis on the word processing functions. The class will provide clarification and review of topics determined by those in attendance. Therefore each session will not cover identical material. This is NOT AN INTRODUCTORY CLASS. It is intended for personnel who are already generally familiar with ALL-IN-1 and need instruction on specific functions. You are encouraged to bring your work materials so that you can use this time to learn and also be productive. A broad range of topics from basic to advanced will be revieved.

# APPENDIX G

## SAN DIEGO UNIFIED SCHOOL DISTRICT

## STUDENT INFORMATION SYSTEM DATABASE FILES

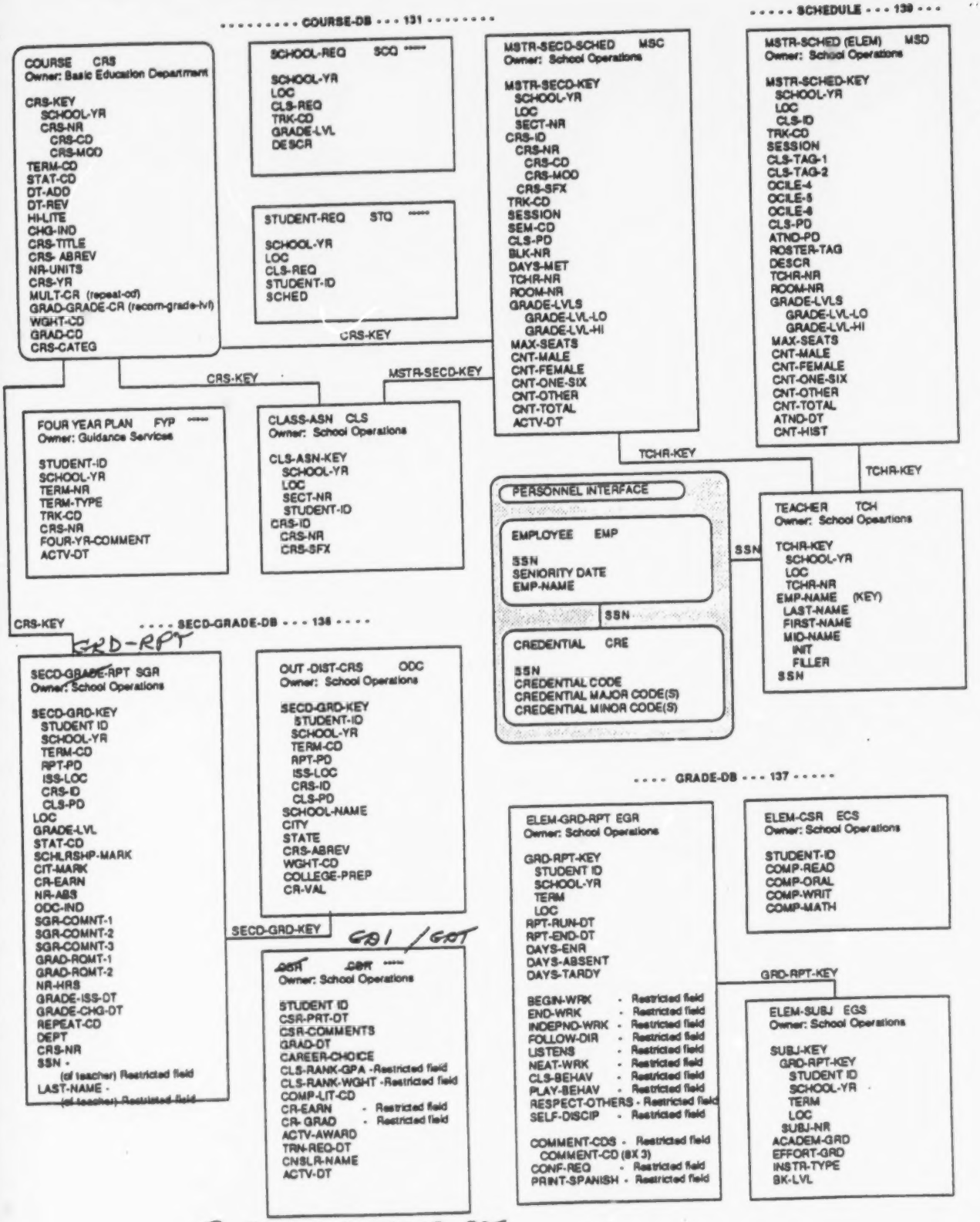
Note: The exhibits used in San Diego Unified's appendices are based on initial design proposals only and do not reflect changes made during the development of the system or enhancements added after implementation.

SDCS



# STUDENT INFORMATION SYSTEM DATABASE

JANUARY 23, 1991

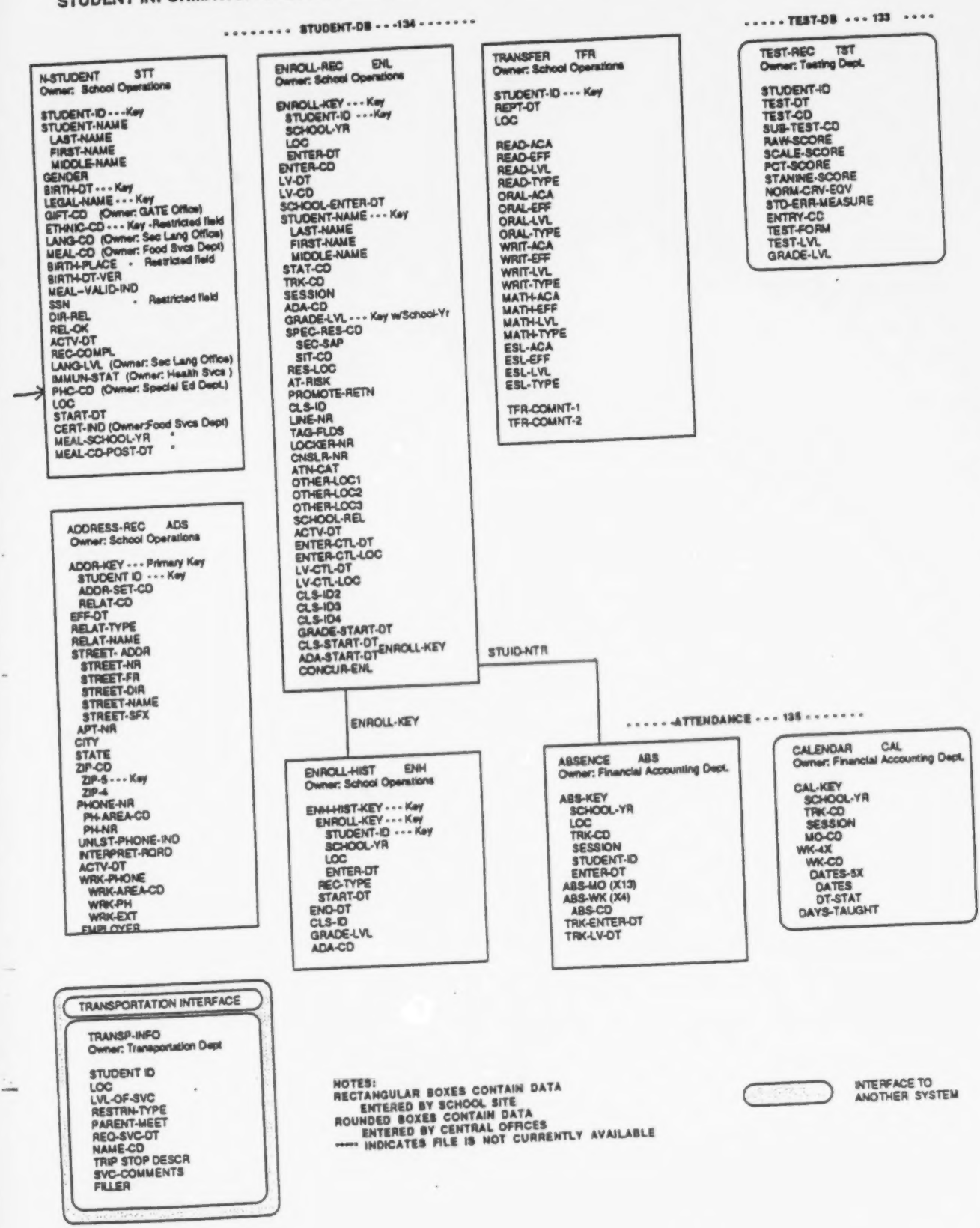



② GRAD-DOC-TRANS GRT

① GRAD-DOC GDI

# STUDENT INFORMATION SYSTEM DATABASE

DECEMBER 4, 1991

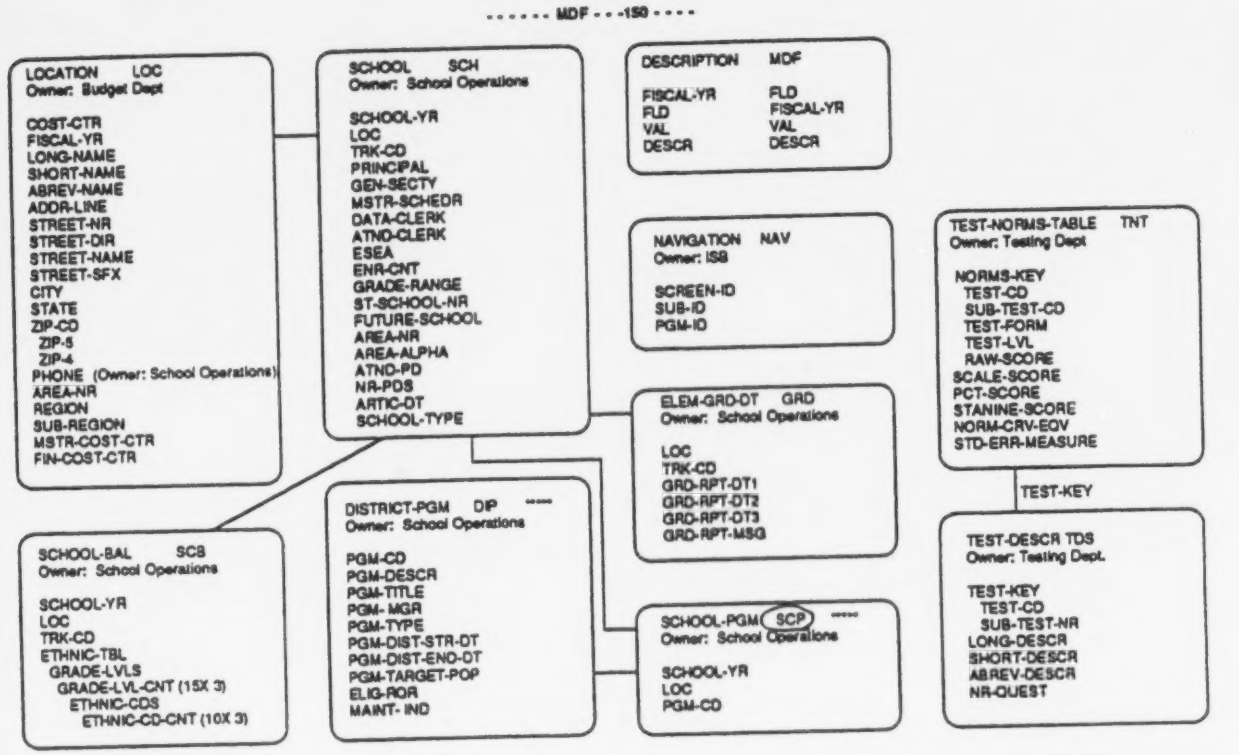


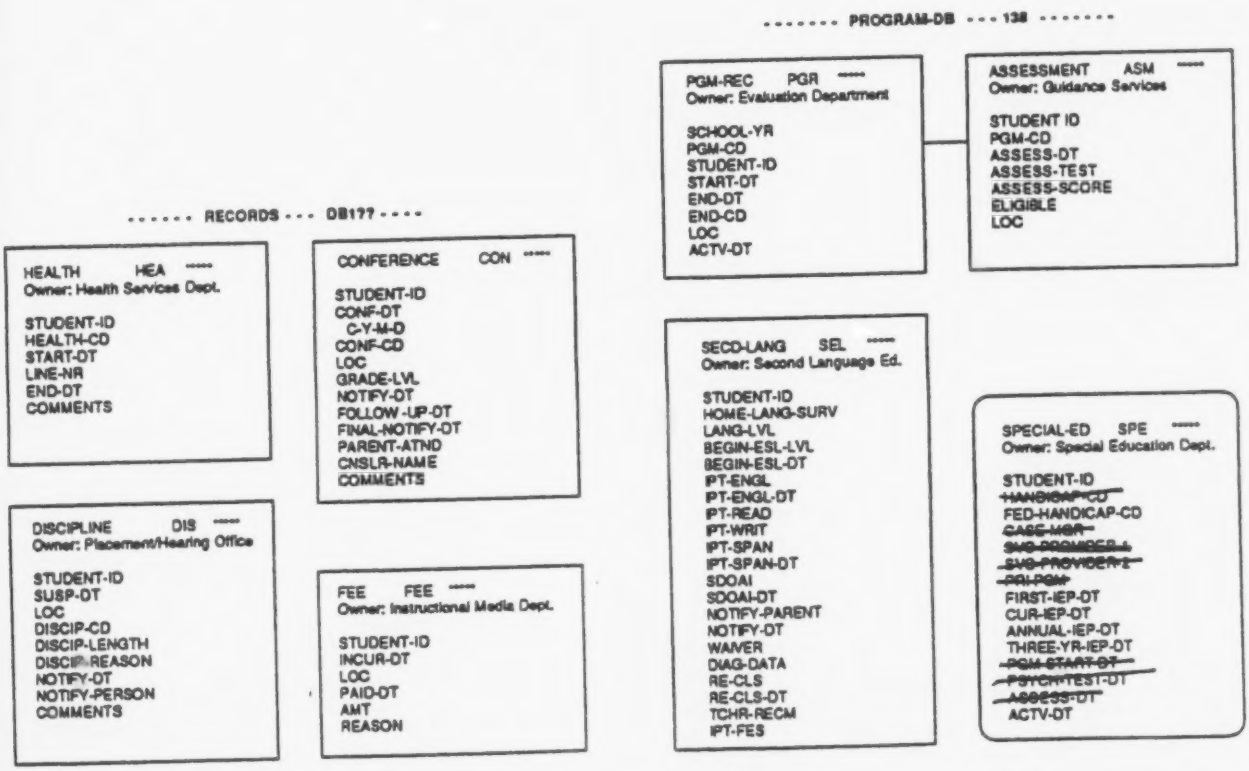
SDCS



## STUDENT INFORMATION SYSTEM DATABASE

JANUARY 23, 1991



# APPENDIX H

## SAN DIEGO UNIFIED SCHOOL DISTRICT

## DATA BASE ELEMENTS

## San Diego City Schools

***Secondary School Software Application Package***

***Required Data Elements: Basic Information***

| | |
|---|---|
| *Student ID | A unique number permanently assigned to each student. |
| *Student Name | The database will maintain at least four (4) names for any student. They are:<br>1. Primary Legal Name<br>2. AKA (Alias/Name)<br>3. Previous Legal Name<br>4. Original Enrollment Name |
| *Birthdate | Date of student's birth. |
| *Gender | This is a one character code that designates a student's gender. |
| *Ethnic Code | This field indicates the student's identified ethnicity. |
| *Home Address | Contains the student's home address. |
| *Home Phone | Contains the student's home phone number. |
| *Unlisted Phone Indicator | Contains a value other than space if the home phone number is noted as "unlisted". |
| *Father's Name<br>*Address<br>Mailing Address<br>*Phone H + W | Contains father's name, home address, home and work phone numbers. |
| *Mother's Name<br>*Address<br>Mailing Address<br>*Phone H + W | Contains mother's name, home address, home and work phone numbers. |
| *Guardian Name<br>*Address<br>Mailing Address<br>*Phone H + W | Contains guardian's name, home address, home and work phone numbers. |
| *Emergency Name<br>*Address<br>*Phone H + W | This name should be any of the above names or a neighbor (if available). If a neighbor, the neighbor's address and home and work number should be provided. |
| *Enter Code | This is a code corresponding to the reason for enrollment in the school specified in the enrollment location field. |

***Non-Required Data Elements***

| | |
|---|---|
| Citizenship | This field denotes the current citizenship of the student. |
| Birthplace | Place of birth of the student. |
| Social Security Number | Entered into the student's records if available. |
| Foreign Language Code(s) | This field indicates all languages a student is fluent in except English. |
| Home Language (LAU Code) | This field designates the language the student speaks in the home. |
| English Language Proficiency Level (LAU Code) | This field designates the level of proficiency the student has in English. |
| LEP Status | This field is a group field containing the Home Language of the student and the student's English Language Proficiency Level. |
| ESL Level | Book and unit student is studying as part of ESL program. |
| Interpreter Required | This field indicates that a student's parents need to be spoken to in their native language. |
| Free-/Reduced-Meal Code | This field indicates that the student is eligible for free or reduced price lunch. |
| Resident-Geographic Location | The resident location of the student as determined by district's Geographic Boundary program. Geographic location code needed for out-of-district student. |
| Directory Release Indicator | Field to indicate authorization to release or not to release directory information. |
| Parent Employment Indicator | This field designates special employment status of student's parents; e.g., Federal Government employees. |
| Prior Address | Contains the student's prior home address. |
| Mailing Address | Contains the student's mailing address. |
| Guardian Type | Guardian type could be grandparent, Legal, Ward of Court, etc. |
| Employer(s) | This data element represents the employer(s) for the above parent(s) or legal guardian with whom the student lives. Employer's address should be included for Federal Census Data requirements. |
| Employer Parent/Guardian Code | This field indicates the parent or guardian to which the employer address refers. |

| | |
|---|---|
| School Name | Name of the school student is attending. |
| Location | The three digit number associated with the school. Usually, numbers less than 300 are elementary schools and numbers between 300 and 400 are secondary schools. |
| Teacher | The name of all teachers for a student. |
| Counselor | The name of the counselor of the student. |
| Homeroom | The Homeroom of a student. |
| Locker Number | This field contains the locker number being used by the student at the school he/she is enrolled in. |
| Attendance Category | The attendance category of the student while at the associated school. Following is a partial list of enrollment categories:<br>• Regular<br>• Special Education Classes |
| Primary Enrollment Location | The location where the student will be counted for attendance ADA. |
| Partial-Day /Attendance Location | The location where the student attended classes but is not counted for attendance ADA. |
| Student Status | Displays students status. Possible status codes are:<br>• Active<br>• Leaves<br>• Extended Illness<br>• Home Vacation<br>• Temporary<br>• Inactive<br>• Pre-Enrollment/Pre-Registration |
| Calendar Code | Includes track code plus the time frame the calendar is spanning. |
| Month | This field is part of the calendar and indicates the month. |
| Day Code(s) | This field is part of the calendar and indicates whether the day of the month is a school day, weekend day, or holiday. |
| School Year | This field indicates the school year of any activity being referenced (i.e., enrollment, program, etc.). |
| Grade Level | The current grade level of the student. |

| | |
|---|---|
| Track Code | Code that indicates the attendance pattern of a student at a school. |
| Term Number | Indicates term for which student is currently enrolled. |
| Term Type | This field indicates whether the term is a semester, quarter, or other term type. |
| Special Placement Condition | This field indicates that the student is enrolled at a school location for one of the following reasons:<br><br>SIP - School Initiated Placement<br>SAP - Special Attendance Permit<br>CCA - Child Care Affidavit<br>YRS - Year-Round School |
| Effective Enrollment Date | Date on which a school is actually accountable for a student for reporting purposes. |
| Enrollment Start Date | This field contains the date the student began attending a particular school. |
| Leave Code | This field contains a code corresponding to the reason for terminating enrollment in the school specified by the enrollment location field. |
| Leave Date | This field contains the date the student terminated enrollment at a particular school. |
| First Enrollment Date | The date on which the student first enrolled in the District. |
| First Enrollment Grade | The grade of the student when first enrolled in the District. |
| First Enrollment School | The school of the student when first enrolled in the District. |
| Prior School Name | An out-of-District school that a student had attended prior to attending a District school. |
| Prior School Address | The address of a school that a student attended prior to attending a District school. |
| Prior School Course Title | The course title of a course taken at an out-of-District school when the course in not offered by the District. |
| Transferred to School | School to which a student has transferred. |
| Transferred Date | Date of student's transfer to new school. |
| Program Code | This field indicates the program(s) that a student is enrolled in. |

| | |
|---|---|
| Program Start Date | This field indicates the starting date of a program for a student. |
| Program End Date | This field indicates that the ending date of a program for a student. |
| Licensed Foster Home Indicator | This field indicates that the student is a resident of a licensed foster home. |
| Graduation Date | This field is the actual graduation date of the student. |
| Fines Amount | The amount of the fine. |
| Fines Date Incurred | The date the student incurred the fine(s). |
| Fines Date Paid | The date the student paid the fine(s). |
| Fines Reason | Any debts or fines including damage or loss of text books, library books, athletic fees, etc. |
| Discipline Reason for Suspension | This code indicates the offense committed. |
| Discipline Code | This code indicates the type of discipline action take. (Expulsion, Suspension, Referral) |
| Discipline Action Date | The date that disciplinary action took place. |
| Discipline Length of Suspension | The length of time of suspension or expulsion. |
| Discipline Time of Suspension | The time of day of suspension or expulsion for the student. |
| Discipline Location | The school location where the discipline infraction took place. |
| Health Code(s) | List of all health status codes. This information would be confidential and not accessible to unauthorized users. |
| Health History Start Date | This field indicates the starting date of a health condition of the student. |
| Health History End Date | This field indicates the ending date of a health condition of the student. |
| Immunization Date | The date of immunization against a specific illness. |
| Immunization Type | The illness that a student has been immunized against. |
| Transportation Level of Service | This field indicates the farthest distance from the student's home that the student's bus stop may be, ranging from at the doorstep to within 1 mile. This field is used primarily by Special Education. |

| | |
|---|---|
| Transportation Must Be Met | This field indicates that the student must be met by parent, guardian, or other authorized person at the bus stop. The student may not be left unattended at a bus stop. |
| Transportation Record Type | This field indicates the type of transportation services provided for the student. This includes "morning," "afternoon," "early-out," and "other" transportation types. |
| Transportation Restraint Type | This field indicates the type of restraint required by the student and includes "wheelchair," "oversize wheelchair," "travel chair," "car seat," "aide required," "nurse required," "body restraint," "lap belt," and "seizures." |
| Transportation Street Address | If the record is a "morning" record type, the address is a "pick-up" address. If the record type is "afternoon," the address is a "delivery" address. If the record type is "early out," the address is an "early-out" address. |
| Promotion Code | Code to indicate the teacher's recommendation for subject levels to be taken the following school year. |
| At Risk Indicator | This field will be entered for K-8 students and computed for 9-12 students based on graduation criteria. |
| Assessment Test Date | This field indicates the date the student was tested for possible entrance to a specific program (e.g., LEP, GATE, etc.) |
| Assessment Test Title | The name of the test given to determine eligibility for a program. |
| Assessment Test Score | The results of the program test. |
| Waiver from Program | This field indicates that a student was eligible for a particular program, but parents or legal guardian declined to place the student in the program. |
| District Program Title | The official title of a District Program. |
| District Program Manager | The person responsible for running the program. |
| District Program Description | A brief description of the program. |
| District Program Target Population | The type of students the program is for. |
| District Program Eligibility Requirements | The eligibility requirements to be accepted into the program. |
| District Program Type | The type of program. |
| Non-Public School | Non-District school of attendance. |

| | |
|---|---|
| Promote/Retain | Designation of whether or not student is to be promoted to next grade level. |
| Referred Program Code | Code of program to which student has been referred. |
| Referred Program Date | Date of referral to program. |
| Special Program Code | GATE assessment code. |
| Special Enrollment Code | Code to indicate participation in special school program. |
| Active Program Code | Unique 9000 series codes of Special Education programs for which a student is currently certified. |
| Active Program Description | Automatic print from 9000 series program codes. |
| Annual IEP Review Date | The date the next IEP is due reviewing the student's progress. |
| Assessment Date | Date of parental consent for assessment from which legal timeline begins. |
| Case Manager | Special Education student's IEP case manager. |
| Current IEP Date | Date of the most recent IEP indicating student certification for specific Special Education program. |
| Eligible Program Start Date | Date when a student is eligible to begin a particular program. |
| Federal Handicap Code | Federal codes for handicap conditions for mandated enrollment reports. |
| First Special Education IEP Date | The first time the student was certified for any Special Education program. |
| Inactive Program Code | Code of Special Education programs in which a student is no longer participating. |
| Inactive Program Description | Automatic print from 9000 series program codes |
| Inactive Program Drop Code | Unique 30 series codes noting the reason the student dropped from the Special Education program. |
| Inactive Program Drop Date | The date on which a student was dropped from a specific Special Education program. |
| Primary Handicapping Condition (PHC) | The primary handicapping condition which enables the student to participate in Special Education. |
| Psychological Test Date | The date a psychological test was administered to a Special Education student. |

| | |
|---|---|
| Transportation Requested Service Date | The date transportation for a student was requested by Special Education. |
| School Attendance Times | School start and dismissal times for the student. |
| Special Education Courses Number | Course number for Special Education classes, in the 7000 series (see scheduling). |
| Special Education Service Provider(s) | Special Education therapist, mobility instructor, resource specialist assigned to the student. |
| Specialized Equipment/Services | This field denotes specialized equipment required for Special Education students. |
| Three Year IEP Review Date | The date of the next three-year assessment of the student's progress. |
| Transportation Met by Whom | The name of the people authorized to meet a student at a "delivery" address. |

# APPENDIX I

SAN DIEGO UNIFIED SCHOOL DISTRICT

**MASTER DATA ELEMENT MATRIX**

SAN DIEGO CITY SCHOOLS

USER SPECIFICATIONS - MASTER DATA ELEMENT MATRIX

| | Format | Size | Enroll | Schedule | Attend | GradeRpt | CSR |
|---|---|---|---|---|---|---|---|
| ABSENCES | D | 2 | | | | G | C |
| ABSENCES-UNEXCUSED | D | 2 | | | | G | C |
| ACADEMIC-GRADE | C | 2 | | | | G | |
| ACTIVE-PROGRAM-CODE | C | 4 | E | | | | |
| ACTIVE-PROGRAM-DESCRIPTION | C | 30 | E | | | | |
| ADVANCED-PLACEMENT-CREDIT | C | 1 | | S | | | C |
| AGE | derived | 0 | E | | | | |
| ANNUAL-IEP-REVIEW-DATE | D | 8 | E | | | | |
| ASSESSMENT-DATE | D | 8 | E | | | | |
| ASSESSMENT-TEST-SCORE | C | 3 | E | | | | |
| ASSESSMENT-TEST-TITLE | C | 30 | E | | | | |
| AT-RISK-INDICATOR | C | 1 | E | | | G | |
| ATTENDANCE-CATEGORY | C | 2 | E | | A | | |
| ATTENDANCE-CODE | C | 1 | | | A | | |
| ATTENDANCE-DATE | D | 8 | | | A | | |
| ATTENDANCE-PERIOD-END-DATE | D | 8 | | | A | | |
| ATTENDANCE-PERIOD-START-DATE | D | 8 | | | A | | |
| BALANCING-CRITERIA | G | 10 | | S | | | |
| BEHAVIOR-CONTRACT | | | | | | G | |
| BIRTHDATE * | D | 8 | E | | A | | |
| BIRTHPLACE | C | 2 | E | | | | |
| CALENDAR-CODE | C | 1 | E | | A | | |
| CAREER-CHOICE | | 0 | | | | | C |
| CASE-MANAGER | C | 44 | E | | | | |
| CITIZENSHIP | C | 2 | E | | | | |
| CITIZENSHIP-GRADE | C | 1 | | | | G | |
| CLASS-MEETING-DAYS | C | 6 | | S | | | |
| CLASS-RANK-BY-WEIGHTED-GPA | D | 4 | | | | G | C |
| CLASS-SIZE-LIMITS | D | 4 | | S | | | |
| CLASS-WEIGHTING-FACTOR | | 0 | | S | | | |
| COLLEGE-COURSE | C | 1 | | | | G | |
| COLLEGE-REQUIREMENT-CODE | C | 1 | | | | | C |
| COMPUTER-LITERACY-PROFICIENCY-CODE | | | | | | | C |
| CONFERENCE-DATE | D | 8 | | | | | C |
| CONFERENCE-FINAL-NOTICE | D | 8 | | | | | C |
| CONFERENCE-FOLLOW-UP-CALL | D | 8 | | | | | C |
| CONFERENCE-PARENT-NOTIFICATION | D | 8 | | | | | C |
| COUNSELOR | C | 44 | E | S | | | |
| COUNSELOR-SSN | D | 9 | | S | | | |
| COURSE-CREDITS | D | 4 | | S | | G | C |
| COURSE-MODIFIER | C | 1 | | S | | G | |
| COURSE-NUMBER | D | 4 | | S | A | | C |
| COURSE-NUMBER-FIRST-CHOICE | D | 4 | | S | | | |
| COURSE-NUMBER-SECOND-CHOICE | D | 4 | | S | | | |
| COURSE-PRIORITY | D | 2 | | S | | | |
| COURSE-TITLE-ABBREVIATION | C | 16 | | S | A | G | C |
| COURSE-TITLE-LONG | C | 30 | | S | A | G | C |
| CREDITS-EARNED | D | 6 | | | | | C |
| CREDITS-NEEDED-FOR-GRADUATION | D | 3 | | | | | C |
| CSR-COMMENTS | C | 30 | | | | | C |
| CSR-PRINT-DATE | D | 8 | | | | | C |

Format:C=character,D=digit,G=groups of data  Size: number of letters or numbers needed for the field

* Required

USER SPECIFICATIONS - MASTER DATA ELEMENT MATRIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CURRENT-IEP-DATE | D | 8 | E | | | | |
| DAY-CODE | C | 1 | E | | A | | |
| DEPARTMENT-CODE | C | 3 | | S | | | |
| DIRECTORY-RELEASE-INDICATOR | C | 1 | E | | | | |
| DISCIPLINE-ACTION-DATE | D | 8 | E | | | | |
| DISCIPLINE-CODE | C | 1 | E | | | | |
| DISCIPLINE-LENGTH-OF-SUSPENSION | D | 2 | E | | | | |
| DISCIPLINE-LOCATION | C | 3 | E | | | | |
| DISCIPLINE-REASON-FOR-SUSPENSION | C | 1 | E | | | | |
| DISCIPLINE-TIME-OF-SUSPENSION | D | 4 | E | | | | |
| DRIVER-EDUCATION-INDICATOR | C | 1 | | | | | C |
| EFFECTIVE-ENROLLMENT-DATE | D | 8 | E | | | | |
| EFFORT-GRADE | C | 1 | | | | G | |
| ELIGIBLE-PROGRAM-START-DATE | D | 8 | E | | | | |
| EMERGENCY-ADDRESS | G | 56 | E | | | | |
| EMERGENCY-HOME-PHONE | D | 7 | E | | | | |
| EMERGENCY-NAME | G | 44 | E | | | | |
| EMERGENCY-WORK-PHONE | D | 7 | E | | | | |
| EMPLOYER-ADDRESS | G | 56 | E | | | | |
| EMPLOYER-PARENT-GUARDIAN-CODE | C | 1 | E | | | | |
| ENGLISH-LANGUAGE-PROFICIENCY-LEVEL | C | 1 | E | | | | C |
| ENROLLMENT-START-DATE | D | 8 | E | | | | |
| ENTER-CODE * | C | 2 | E | | | | |
| ESL-LEVEL | C | 5 | | | | | C |
| ETHNIC-CODE* | C | 1 | E | S | A | | |
| FATHER-ADDRESS * | G | 56 | E | | | G | |
| FATHER-HOME-PHONE * | D | 10 | E | | | | |
| FATHER-MAILING-ADDRESS | G | 56 | E | | | G | |
| FATHER-NAME* | G | 44 | E | | | G | |
| FATHER-WORK-PHONE* | D | 10 | E | | | | |
| FEDERAL-HANDICAP-CODE | C | 5 | E | | | | |
| FINES-AMOUNT | D | 6 | E | | | G | |
| FINES-DATE-INCURRED | D | 8 | E | | | G | |
| FINES-DATE-PAID | D | 8 | E | | | G | |
| FINES-REASON | C | 30 | E | | | G | |
| FIRST-ENROLLMENT-DATE | D | 8 | E | | | | C |
| FIRST-ENROLLMENT-GRADE | C | 2 | E | | | | |
| FIRST-ENROLLMENT-SCHOOL | C | 3 | E | | | | |
| FIRST-SPECIAL-EDUCATION-IEP-DATE | D | 8 | E | | | | |
| FOREIGN-LANGUAGE-CODE | C | 2 | E | | | | |
| FOUR-YEAR-PLAN-COMMENTS | C | 30 | | | | | C |
| FREE/REDUCED MEAL CODE | C | 1 | E | | | | |
| GENDER* | C | 1 | E | S | A | | |
| GRADE-LEVEL | C | 2 | E | S | A | G | C |
| GRADE-REPORTING-COMMENT-LIST | C | 3 | | | | G | |
| GRADE-REPORTING-OPTIONAL-COMMENTS | C | 30 | | | | G | |
| GRADING-PERIOD | C | 1 | | | | G | |
| GRADUATION-DATE | D | 4 | E | | | | C |
| GRADUATION-REQUIREMENT-AREA | C | 2 | | S | | | C |
| GUARDIAN-ADDRESS* | G | 56 | E | | | G | |
| GUARDIAN-HOME-PHONE * | D | 7 | E | | | | |
| GUARDIAN-MAILING-ADDRESS | G | 56 | E | | | G | |

Format:C=character,D=digit,G=groups of data  Size: number of letters or numbers needed for the field

## USER SPECIFICATIONS - MASTER DATA ELEMENT MATRIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GUARDIAN-NAME * | G | 44 | E | | | G | |
| GUARDIAN-TYPE | C | 1 | E | | | | |
| GUARDIAN-WORK-PHONE * | D | 7 | E | | | | |
| HEALTH-CODE | C | 3 | E | | | | |
| HEALTH-HISTORY-COMMENTS | C | 30 | E | | | | |
| HEALTH-HISTORY-END-DATE | D | 8 | E | | | | |
| HEALTH-HISTORY-START-DATE | D | 8 | E | | | G | |
| HOME-ADDRESS* | G | 56 | E | | A | | |
| HOME-LANGUAGE | C | 2 | E | | | | |
| HOME-PHONE* | D | 7 | E | | A | | |
| HOMEROOM | C | 5 | E | | | | |
| I-94* | C | 2 | E | | | | C |
| IMMUNIZATION-DATE | D | 8 | E | | | | C |
| IMMUNIZATION-TYPE | C | 4 | E | | | | |
| INACTIVE-PROGRAM-CODE | C | 3 | E | | | | |
| INACTIVE-PROGRAM-DESCRIPTION | C | 30 | E | | | | |
| INACTIVE-PROGRAM-DROP-CODE | C | 2 | E | | | | |
| INACTIVE-PROGRAM-DROP-DATE | D | 8 | E | | | | |
| INTERPRETER-REQUIRED | C | 1 | E | | | | |
| LEAVE-CODE | C | 2 | E | | | | |
| LEAVE-DATE | D | 8 | E | | | | C |
| LEP-STATUS=Home Lang + Engl Lang Proficiency | G | 3 | E | | | | |
| LICENSED-FOSTER-HOME-INDICATOR | C | 1 | E | | | | |
| LOCATION | C | 3 | E | S | A | G | C |
| LOCKER-NUMBER | C | 5 | E | | | | |
| MAILING-ADDRESS | G | 56 | E | | | G | |
| MATH-BOOK-GRADE-LEVEL | C | 1 | | | | | C |
| MONTH | C | 2 | E | | A | | |
| MOTHER-ADDRESS* | G | 56 | E | | | G | |
| MOTHER-HOME-PHONE* | D | 10 | E | | | | |
| MOTHER-MAILING-ADDRESS | G | 56 | E | | | G | |
| MOTHER-NAME * | G | 44 | E | | | G | |
| MOTHER-WORK-PHONE* | D | 10 | E | | | | |
| NON-PUBLIC-SCHOOL | C | 2 | E | | | | |
| OUT-OF-DISTRICT-INDICATOR | C | 1 | | | | | C |
| PARENT-EMPLOYMENT-INDICATOR | C | 1 | E | | | | |
| PARENT-GUARDIAN-PARTICIPATION | C | 1 | | | | | C |
| PARTIAL-DAY-ATTENDANCE-LOCATION | C | 3 | E | | A | | |
| PERIOD | D | 2 | | S | A | G | |
| PERIODS-FOR-COURSE-SCHEDULING | D | 2 | | S | | | |
| PHYSICAL-EXAM-FIRST-GRADE | C | 1 | E | | | | |
| PREREQUISITE-COURSE | C | 1 | | S | | | |
| PRIMARY-ENROLLMENT-LOCATION | C | 3 | E | | A | | |
| PRIMARY-HANDICAPPING-CONDITION | C | 1 | E | | | | |
| PRIOR-ADDRESS | G | 56 | E | | | | |
| PRIOR-SCHOOL-ADDRESS | G | 56 | E | | | | C |
| PRIOR-SCHOOL-COURSE-TITLE | C | 30 | E | | | | C |
| PRIOR-SCHOOL-NAME | C | 30 | E | | | | C |
| PROGRAM-CODE | C | 4 | E | | A | | |
| PROGRAM-DESCRIPTION | C | 80 | E | | | | |
| PROGRAM-DISTRICT-END-DATE | D | 8 | | | | | |
| PROGRAM-DISTRICT-START-DATE | D | 8 | | | | | |

Format:C=character,D=digit,G=groups of data  Size: number of letters or numbers needed for the field

USER SPECIFICATIONS - MASTER DATA ELEMENT MATRIX

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PROGRAM-ELIGIBILITY-REQUIREMENT | C | 30 | E | | | | |
| PROGRAM-END-DATE | D | 8 | E | | | | C |
| PROGRAM-LOCATION | C | 3 | E | | | | |
| PROGRAM-MANAGER | C | 44 | E | | | | |
| PROGRAM-START-DATE | D | 8 | E | | | | C |
| PROGRAM-TARGET-POPULATION | C | 1 | E | | | | |
| PROGRAM-TITLE | C | 16 | E | | A | | |
| PROGRAM-TYPE | C | 1 | E | | A | | |
| PROMOTE/RETAIN | C | 2 | E | | | | |
| PSYCHOLOGICAL-TEST-DATE | D | 8 | E | | | | |
| READING-BOOK-GRADE-LEVEL | C | 1 | | | | | C |
| RECOMMENDED-GRADE-LEVEL | C | 4 | | S | | | |
| REFERRED-PROGRAM-CODE | C | 4 | E | | | | |
| REFERRED-PROGRAM-DATE | D | 8 | E | | | | |
| REPEAT-CODE | C | 1 | | | | | C |
| RESIDENT-GEOGRAPHIC-LOCATION | C | 3 | E | | | | |
| ROOM-NUMBER | C | 5 | | S | A | | |
| ROOM-TYPE | C | 4 | | S | | | |
| SCHEDULING-COMMENTS | C | 30 | | S | | | |
| SCHOOL-ADDRESS | G | 58 | | | | | |
| SCHOOL-ATTENDANCE-TIMES | C | 50 | E | | | | |
| SCHOOL-NAME-ABBREVIATION | C | 4 | E | | | | |
| SCHOOL-NAME-LONG | C | 30 | E | | | | C |
| SCHOOL-NAME-SHORT | C | 12 | E | | | | |
| SCHOOL-YEAR | C | 4 | E | S | A | G | C |
| SECTION | D | 2 | | S | A | G | C |
| SOCIAL-SECURITY-NUMBER | D | 9 | E | | | | |
| SPECIAL-EDUCATION-COURSE-NUMBER | D | 4 | E | | | | |
| SPECIAL-EDUCATION-SERVICE-PROVIDER | G | 44 | E | | | | |
| SPECIAL-PLACEMENT-CONDITIONS | C | 3 | E | | | | |
| SPECIALIZED-EQUIPMENT/SERVICES | C | 30 | E | | | | |
| STUDENT-ACTIVITIES/AWARDS | C | 30 | | | | | C |
| STUDENT-ID** | D | 9 | E | S | A | G | C |
| STUDENT-NAME-AKA** | G | 44 | E | S | | | |
| STUDENT-NAME-ORIGINAL-ENROLLMENT * | G | 44 | E | | | | |
| STUDENT-NAME-PREVIOUS-LEGAL* | G | 44 | E | | | | |
| STUDENT-NAME-PRIMARY-LEGAL * | G | 44 | E | S | A | G | C |
| STUDENT-STATUS | C | 1 | E | | | | |
| TARDIES | D | 2 | | | | G | C |
| TEACHER | G | 44 | E | S | A | G | |
| TEACHER-NUMBER | D | 3 | | S | | | |
| TEACHER-SSN | D | 9 | | S | | | |
| TERM-NUMBER | D | 1 | E | S | A | G | C |
| TERM-TYPE | C | 1 | E | S | A | G | C |
| TEST-CODE | C | 4 | | | | | C |
| TEST-DATE | D | 4 | | | | | C |
| TEST-LOCATION | C | 3 | | | | | C |
| TEST-RESULTS | C | 4 | | | | | C |
| THREE-YEAR-IEP-REVIEW-DATE | D | 8 | E | | | | |
| TRACK-CODE | C | 1 | E | S | A | | C |
| TRANS-RESTRAINT-TYPE | C | 1 | E | | | | |
| TRANSCRIPT-REQUEST-DATE | D | 8 | | | | | |

Format:C=character,D=digit,G=groups of data  Size: number of letters or numbers needed for the field

USER SPECIFICATIONS - MASTER DATA ELEMENT MATRIX

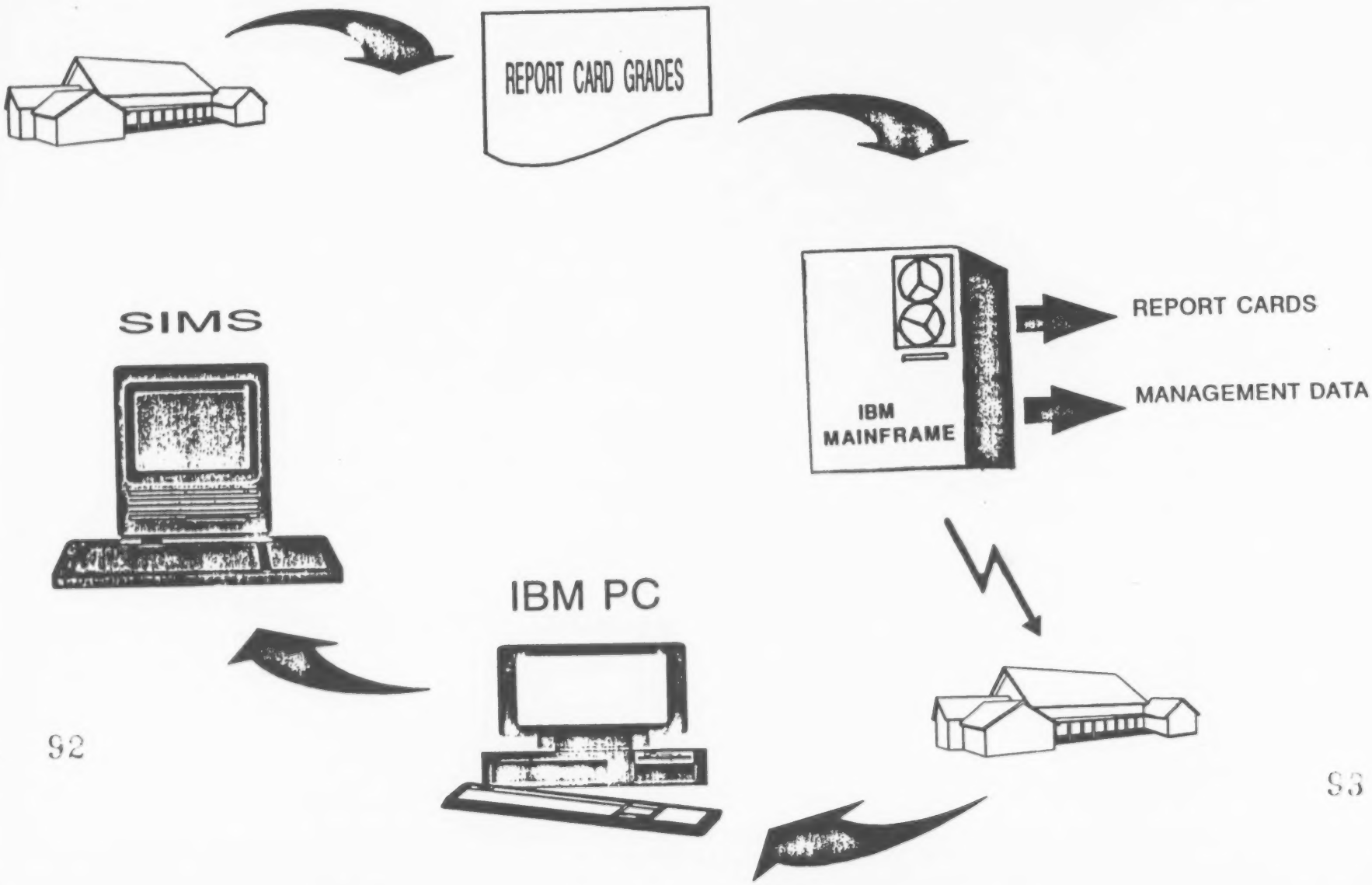
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TRANSFERRED-DATE | D | 8 | E | | | | |
| TRANSFERRED-TO-SCHOOL | C | 3 | E | | | | |
| TRANSPORTATION-LEVEL-OF-SERVICE | C | 1 | E | | | | |
| TRANSPORTATION-MET-BY-WHOM | C | 44 | E | | | | |
| TRANSPORTATION-MUST-BE-MET | C | 1 | E | | | | |
| TRANSPORTATION-RECORD-TYPE | C | 1 | E | | | | |
| TRANSPORTATION-REQUESTED-SERVICE-DATE | D | 8 | E | | | | |
| TRANSPORTATION-STREET-ADDRESS | G | 26 | E | | | | |
| UNLISTED-PHONE-INDICATOR* | C | 1 | E | | | | |
| WAIVER-FROM-PROGRAM | C | 1 | E | | | | |
| WEIGHTED-GPA | C | 1 | | | | G | |
| WRITTEN-LANGUAGE-BOOK-GRADE-LEVEL | C | 1 | | | | | C |
| | | | | | | | |
| | | | | | | | |

nat:C=character,D=digit,G=groups of data  Size: number of letters or numbers needed for the field

# APPENDIX J

MONTGOMERY COUNTY PUBLIC SCHOOLS

## DATA COMMUNICATIONS CONFIGURATION


REPORT CARD GRADES
SIMS
IBM MAINFRAME
REPORT CARDS
MANAGEMENT DATA
IBM PC

# SIMS SCHOOL CONFIGURATION

| | | |
|---|---|---|
| **HARDWARE** | MS-DOS link to mainframe | |
| 1990-92 | Macintosh SE 30 | 3 per elementary<br>4 per secondary |
| | 1 LaserWriter IINT | |
| 1992-93 | Macintosh LCII | 2 per elementary |
| | Macintosh IIsi | 1 per elementary<br>4 per secondary |
| | 1 LaserWriter | |
| **SOFTWARE** | Microsoft Works<br>DosMounter<br>TOPS | Redux<br>Disinfectant |

# APPENDIX K

MONTGOMERY COUNTY PUBLIC SCHOOLS

## QUARTERLY PROCESS OF SIMS

# QUARTERLY PROCESS OF SIMS

- Collection of report card data by teachers
- Completion of bubble sheets
- Scan grades into IBM 3090 Mainframe
- Extract data from database creating school files
  - courses
  - grades
  - tests
  - biographical
- Electronic download of data by schools into IBM/PC
- Transfer data to MAC via TOPS

- Analysis of students' performances
- Early intervention/special programs
- Improvement of student performance

# APPENDIX L

MONTGOMERY COUNTY PUBLIC SCHOOLS

## DATABASE ELEMENTS
**(Senior High, Midlevel, Elementary)**

SRHI STUDIO

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | |
| HOUSE NUMBER | HOUSE# | 10 | |
| DIRECTION (N, S, E, W) | DIR | 11 | |
| STREET NAME | STREET | 12 | |
| STREET TYPE | STTYPE | 13 | |
| APARTMENT NUMBER | APT# | 14 | |
| CITY | CITY | 15 | |
| STATE | ST | 16 | |
| ZIP | ZIP | 17 | |
| SECTION NUMBER | SEC | 18 | |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/92 |
| ELEM FEEDER SCHOOL NUMBER | ESCH | 20 | 7/92 |
| MID FEEDER SCHOOL NUMBER | MSCH | 21 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 22 | |
| ESOL (Y/N) | ESOL | 23 | |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 24 | |
| ENTRY DATE (MM/DD/YY) | ENTRY | 25 | |
| YEAR TO DATE ABSENCES | YTDAB | 26 | |
| DAYS ABSENT LAST YEAR | DALY | 27 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 28 | 7/92 |
| HONORS (ENROLLED IN ONE OR MORE HONORS CLASS) | H | 29 | |
| VALUE: | | | |
| = Y IF ENROLLED IN AT LEAST ONE HONORS CLASS | | | |
| = N NO HONORS CLASS | | | |
| IEP (Y/N) | IEP | 30 | |
| ELIGIBILITY (Y/N) | ELIG | 31 | 7/92 |
| VOCATIONAL | VOC | 32 | 10/92 |
| FREE & REDUCED LUNCH | F&R | 33 | 7/92 |
| VALUE: | | | |
| F = FREE | | | |
| R = REDUCED | | | |
| N = NOT ELIGIBLE | | | |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 34 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 35 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 36 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 37 | 11/92 |
| ALGEBRA 1 (Y/N) | ALG | 38 | 11/92 |
| COUNT FIELD (VALUE = 1) | C | 39 | |
| | | | |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | 7/02 |
| LAST NAME | LAST | 2 | 7/02 |
| FIRST NAME | FIRST | 3 | 7/02 |
| INITIAL | MI | 4 | 7/02 |
| GRADE | GR | 5 | 7/02 |
| GENDER | G | 6 | 7/02 |
| RACE (W,B,H,I,A) | R | 7 | 7/02 |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | 7/02 |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | 7/02 |
| HOUSE NUMBER | HOUSE# | 10 | 7/02 |
| DIRECTION (N, S, E, W) | DIR | 11 | 7/02 |
| STREET NAME | STREET | 12 | 7/02 |
| STREET TYPE | STTYPE | 13 | 7/02 |
| APARTMENT NUMBER | APT# | 14 | 7/02 |
| CITY | CITY | 15 | 7/02 |
| STATE | ST | 16 | 7/02 |
| ZIP | ZIP | 17 | 7/02 |
| SECTION NUMBER | SEC | 18 | 7/02 |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/02 |
| SPECIAL ED (Y/N) | SPED | 20 | 7/02 |
| ESOL (Y/N) | ESOL | 21 | 7/02 |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 22 | 7/02 |
| ENTRY DATE (MM/DD/YY) | ENTRY | 23 | 7/02 |
| YEAR TO DATE ABSENCES | YTDAB | 24 | 7/02 |
| DAYS ABSENT LAST YEAR | DALY | 25 | 7/02 |
| DAYS PRESENT LAST YEAR | DPLY | 26 | 7/02 |
| CRT TOTAL MATH SCORE | MCRT | 27 | 7/02 |
| CRT TOTAL READING SCORE | RCRT | 28 | 7/02 |
| FIRST LEVEL OF SERVICE | LS1 | 29 | 7/02 |
| GROUP CODE 1 | GC1 | 30 | 7/02 |
| PRIMARY PROGRAM CODE 1 | PPC1 | 31 | 7/02 |
| SECOND LEVEL OF SERVICE | LS2 | 32 | 7/02 |
| GROUP CODE 2 | GC2 | 33 | 7/02 |
| RELATED SERVICES CODE 2 | RS2 | 34 | 7/02 |
| THIRD LEVEL OF SERVICE | LS3 | 35 | 7/02 |
| GROUP CODE 3 | GC3 | 36 | 7/02 |
| RELATED SERVICES CODE 3 | RS3 | 37 | 7/02 |
| FOURTH LEVEL OF SERVICE | LS4 | 38 | 7/02 |
| GROUP CODE 4 | GC4 | 39 | 7/02 |
| RELATED SERVICES CODE 4 | RS4 | 40 | 7/02 |
| ELIGIBILITY (Y/N) | ELIG | 41 | 7/02 |
| SAT INDICATOR (Y/N) | SAT | 42 | 7/02 |
| PSAT INDICATOR (Y/N) | PSAT | 43 | 7/02 |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 44 | 11/02 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 45 | 11/02 |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| THIRD MARKING PERIOD AVERAGE | MPA3 | 46 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 47 | 11/92 |
| ALGEBRA 1 (Y/N) | ALG | 48 | 11/92 |
| COUNT FIELD (VALUE = 1) | C | 49 | 7/92 |
| | | | |

SRHI FUNCTIONALS

| ELEMENTS | CODE | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| SECTION NUMBER | SEC | 8 | |
| HOME SCHOOL | HSCH | 9 | |
| ELEM FEEDER SCHOOL NUMBER | ESCH | 10 | 7/92 |
| MID FEEDER SCHOOL NUMBER | MSCH | 11 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 12 | 7/92 |
| ESOL (Y/N) | ESOL | 13 | 7/92 |
| GRADE 7 FUNCTIONAL READING TOTAL | RT7 | 14 | |
| READING TEST DATE (MM/YY) | RTD7 | 15 | |
| READING PASS/FAIL (P/F) | RPF7 | 16 | |
| GRADE 7 FUNCTIONAL MATH TOTAL | MT7 | 17 | |
| MATH TEST DATE (MM/YY) | MTD7 | 18 | |
| MATH PASS/FAIL (P/F) | MPF7 | 19 | |
| GRADE 9 READING TOTAL SCORE | RT9 | 20 | |
| READING FOLLOWS DIRECTIONS | RFD9 | 21 | |
| READING LOCATE INFORMATION | RLI9 | 22 | |
| READING GAIN MAIN IDEAS | RMI9 | 23 | |
| READING GAIN INFO DETAILS | RGI9 | 24 | |
| READING UNDERSTANDING FORMS | RUF9 | 25 | |
| READING TEST DATE (MM/YY) | RTD9 | 26 | |
| READING PASS/FAIL (P/F) | RPF9 | 27 | |
| READING TIMES TAKEN | RFREQ9 | 28 | |
| GRADE 9 MATH TOTAL SCORE | MT9 | 29 | |
| MATH NUMBER CONCEPTS | MNC9 | 30 | |
| MATH WHOLE NUMBERS | MWN9 | 31 | |
| MATH MIXED NUMBERS | MN9 | 32 | |
| MATH DECIMALS | MD9 | 33 | |
| MATH MEASUREMENT | MM9 | 34 | |
| MATH USING DATA | MUD9 | 35 | |
| MATH PROBLEM SOLVING | MPS9 | 36 | |
| MATH TEST DATE (MM/YY) | MTD9 | 37 | |
| MATH PASS/FAIL (P/F) | MPF9 | 38 | |
| MATH TIMES TAKEN | MFREQ9 | 39 | |
| GRADE 9 WRITING TOTAL SCORE | WTS9 | 40 | |
| WRITING NARRATIVE | WN9 | 41 | |
| WRITING EXPLANATORY | WE9 | 42 | |
| WRITING TEST DATE (MM/YY) | WTD9 | 43 | |
| WRITING PASS/FAIL (P/F) | WPF9 | 44 | |
| WRITING TIMES TAKEN | WFREQ9 | 45 | |

SRHI FUNCTIONALS

| ELEMENTS | CODE | Field # | New Data Avail |
|---|---|---|---|
| GRADE 9 CITIZENSHIP TOTAL SCORE | CTS9 | 46 | |
| CITIZENSHIP CONSTITUTIONAL GOV'T | CCG9 | 47 | |
| CITIZENSHIP PRINCIPLES, RIGHTS | CPR9 | 48 | |
| CITIZENSHIP POLITICAL BEHAVIOR | CPB9 | 49 | |
| CITIZENSHIP TEST DATE (MM/YY) | CTD9 | 50 | |
| CITIZENSHIP PASS/FAIL (P/F) | CPF9 | 51 | |
| CITIZENSHIP TIMES TAKEN | CFREQ9 | 52 | |
| YEAR TO DATE ABSENCES | YTDAB | 53 | |
| DAYS ABSENT LAST YEAR | DALY | 54 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 55 | 7/92 |
| CRT TOTAL MATH SCORE | MCRT | 56 | 7/92 |
| CRT TOTAL READING SCORE | RCRT | 57 | 7/92 |
| COUNT FIELD (VALUE = 1) | C | 58 | |
| | | | |
| | | | |
| NOTE: 1991-92 FUNCTIONAL TESTS ARE | | | |
| AVAILABLE JULY. SUMMER FUNCTIONAL | | | |
| TESTS NOT AVAILABLE UNTIL END OF | | | |
| AUGUST. | | | |

SRHI COURSES

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| SECTION NUMBER | SEC | 8 | |
| MID FEEDER SCHOOL NUMBER | MSCH | 9 | 7/92 |
| GROUP CODE | GC | 10 | |
| VALUE: | | | |
| 10 = ENGLISH 35 = FOREIGN LANG | | | |
| 15 = SCIENCE 40 = FINE ARTS | | | |
| 20 = SOC STUDIES 45 = PRACTICAL ARTS | | | |
| 25 = MATH 95 = PHYSICAL ACTIVITY | | | |
| 30 = PE 00 = OTHER | | | |
| HONORS (ENROLLED IN ONE OR MORE HONORS CLASS) | H | 11 | |
| VALUE: | | | |
| = Y IF ENROLLED IN AT LEAST ONE HONORS CLASS | | | |
| = N NO HONORS CLASS | | | |
| COURSE NUMBER | CRS# | 12 | |
| COURSE TITLE | CRSTITLE | 13 | |
| COURSE LEVEL | CRSLV | 14 | |
| CLASS NUMBER | CLASS | 14 | |
| DURATION | DUR | 16 | |
| VALUE: | | | |
| S1 = SEMESTER 1 | | | |
| S2 = SEMESTER 2 | | | |
| PERIOD | PD | 17 | |
| TEACHER, LAST NAME | TCHL | 18 | |
| TEACHER, FIRST INITIAL | TCHF | 19 | |
| MARK 1 OR MARK 3 | M1 | 20 | 7/92 |
| MARK 1 OR MARK 3 NUMERIC VALUE | M1# | 21 | 7/92 |
| VALUE: | | | |
| A=4; B=3; C=2; D=1; E=0; L=0 | | | |
| ALL OTHER MARKS = BLANK | | | |
| MARK 1 OR MARK 3 DAYS ABSENT | AB1 | 22 | 7/92 |
| MARK 2 OR MARK 4 | M2 | 23 | 7/92 |
| MARK 2 OR MARK 4 NUMERIC VALUE | M2# | 24 | 7/92 |
| MARK 2 OR MARK 4 DAYS ABSENT | AB2 | 25 | 7/92 |
| EXAM | EX | 26 | |
| EXAM NUMERIC | EX# | 27 | |
| FINAL | FNL | 28 | |
| FINAL NUMERIC | FNL# | 29 | |
| YEAR TO DATE ABSENCES | YTDAB | 30 | |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| DAYS ABSENT LAST YEAR | DALY | 31 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 32 | 7/92 |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 33 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 34 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 35 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 36 | 11/92 |
| COUNT FIELD (VALUE=1) | C | 37 | |

SRHI SAT DATA

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | 7/92 |
| LAST NAME | LAST | 2 | 7/92 |
| FIRST NAME | FIRST | 3 | 7/92 |
| INITIAL | MI | 4 | 7/92 |
| GRADE | GR | 5 | 7/92 |
| GENDER | G | 6 | 7/92 |
| RACE (W.B.H.I.A) | R | 7 | 7/92 |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | 7/92 |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | 7/92 |
| HOUSE NUMBER | HOUSE# | 10 | 7/92 |
| DIRECTION (N, S, E, W) | DIR | 11 | 7/92 |
| STREET NAME | STREET | 12 | 7/92 |
| STREET TYPE | STTYPE | 13 | 7/92 |
| APARTMENT NUMBER | APT# | 14 | 7/92 |
| CITY | CITY | 15 | 7/92 |
| STATE | ST | 16 | 7/92 |
| ZIP | ZIP | 17 | 7/92 |
| SECTION NUMBER | SEC | 18 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 19 | 7/92 |
| ESOL (Y/N) | ESOL | 20 | 7/92 |
| PSAT MATH SCORE | PMATH | 21 | 7/92 |
| PSAT VERBAL SCORE | PVERB | 22 | 7/92 |
| PSAT TOTAL SCORE | PTOT | 23 | 7/92 |
| PSAT DATE TAKEN | PDATE | 24 | 7/92 |
| SAT MATH SCORE | SMATH | 25 | 7/92 |
| SAT VERBAL SCORE | SVERB | 26 | 7/92 |
| SAT WRITING SCORE | SWRT | 27 | 7/92 |
| SAT TOTAL SCORE | STOT | 28 | 7/92 |
| SAT DATE TAKEN | SDATE | 29 | 7/92 |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 30 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 31 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 32 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 33 | 11/92 |
| ALGEBRA 1 (Y/N) | ALG | 34 | 11/92 |
| COUNT FIELD (VALUE = 1) | C | 35 | 7/92 |
| | | | |
| | | | |
| NOTE: SATS TAKEN PRIOR TO APRIL ARE | | | |
| AVAILABLE JULY. APRIL SATS ARE NOT | | | |
| AVAILABLE UNTIL END OF AUGUST. | | | |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | |
| HOUSE NUMBER | HOUSE# | 10 | |
| DIRECTION (N, S, E, W) | DIR | 11 | |
| STREET NAME | STREET | 12 | |
| STREET TYPE | STTYPE | 13 | |
| APARTMENT NUMBER | APT# | 14 | |
| CITY | CITY | 15 | |
| STATE | ST | 16 | |
| ZIP | ZIP | 17 | |
| SECTION NUMBER | SEC | 18 | |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/92 |
| ELEM FEEDER SCHOOL NUMBER | ESCH | 20 | 7/92 |
| NEXT YEAR'S SCHOOL NUMBER | NSCH | 21 | |
| SPECIAL ED (Y/N) | SPED | 22 | |
| ESOL (Y/N) | ESOL | 23 | |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 24 | |
| ENTRY DATE (MM/DD/YY) | ENTRY | 25 | |
| YEAR TO DATE ABSENCES | YTDAB | 26 | |
| DAYS ABSENT LAST YEAR | DALY | 27 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 28 | 7/92 |
| TEAM NUMBER | TEAM# | 29 | |
| MATH LEVEL | MLV | 30 | |
| G/T (ENROLLED IN ONE OR MORE G/T CLASS) (Y/N) | GT | 31 | |
| IEP (Y/N) | IEP | 32 | |
| CHAPTER 1 | CH1 | 33 | 7/92 |
| VALUE: | | | |
| M = MATH | | | |
| R = READING | | | |
| B = BOTH | | | |
| FREE & REDUCED LUNCH | F&R | 34 | 7/92 |
| VALUE: | | | |
| F = FREE | | | |
| R = REDUCED | | | |
| N = NOT ELIGIBLE | | | |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 36 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 36 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 37 | 11/92 |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 38 | 11/82 |
| COUNT FIELD (VALUE = 1) | C | 39 | |
| | | | |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | 7/92 |
| LAST NAME | LAST | 2 | 7/92 |
| FIRST NAME | FIRST | 3 | 7/92 |
| INITIAL | MI | 4 | 7/92 |
| GRADE | GR | 5 | 7/92 |
| GENDER | G | 6 | 7/92 |
| RACE (W,B,H,I,A) | R | 7 | 7/92 |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | 7/92 |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | 7/92 |
| HOUSE NUMBER | HOUSE# | 10 | 7/92 |
| DIRECTION (N, S, E, W) | DIR | 11 | 7/92 |
| STREET NAME | STREET | 12 | 7/92 |
| STREET TYPE | STTYPE | 13 | 7/92 |
| APARTMENT NUMBER | APT# | 14 | 7/92 |
| CITY | CITY | 15 | 7/92 |
| STATE | ST | 16 | 7/92 |
| ZIP | ZIP | 17 | 7/92 |
| SECTION NUMBER | SEC | 18 | 7/92 |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 20 | 7/92 |
| ESOL (Y/N) | ESOL | 21 | 7/92 |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 22 | 7/92 |
| ENTRY DATE (MM/DD/YY) | ENTRY | 23 | 7/92 |
| YEAR TO DATE ABSENCES | YTDAB | 24 | 7/92 |
| DAYS ABSENT LAST YEAR | DALY | 25 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 26 | 7/92 |
| CRT TOTAL MATH SCORE | MCRT | 27 | 7/92 |
| CRT TOTAL READING SCORE | RCRT | 28 | 7/92 |
| FIRST LEVEL OF SERVICE | LS1 | 29 | 7/92 |
| GROUP CODE 1 | GC1 | 30 | 7/92 |
| PRIMARY PROGRAM CODE 1 | PPC1 | 31 | 7/92 |
| SECOND LEVEL OF SERVICE | LS2 | 32 | 7/92 |
| GROUP CODE 2 | GC2 | 33 | 7/92 |
| RELATED SERVICES CODE 2 | RS2 | 34 | 7/92 |
| THIRD LEVEL OF SERVICE | LS3 | 35 | 7/92 |
| GROUP CODE 3 | GC3 | 36 | 7/92 |
| RELATED SERVICES CODE 3 | RS3 | 37 | 7/92 |
| FOURTH LEVEL OF SERVICE | LS4 | 38 | 7/92 |
| GROUP CODE 4 | GC4 | 39 | 7/92 |
| RELATED SERVICES CODE 4 | RS4 | 40 | 7/92 |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 41 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 42 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 43 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 44 | 11/92 |
| COUNT FIELD (VALUE = 1) | C | 45 | 7/92 |
| | | | |

MIDLEVEL FUNCTIONALS

| ELEMENTS | CODE | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| SECTION NUMBER | SEC | 8 | |
| ELEM FEEDER SCHOOL NUMBER | ESCH | 9 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 10 | 7/92 |
| ESOL (Y/N) | ESOL | 11 | 7/92 |
| GRADE 7 FUNCTIONAL READING TOTAL | RT | 12 | |
| READING FOLLOWS DIRECTIONS | RFD | 13 | |
| READING LOCATE INFORMATION | RLI | 14 | |
| READING GAIN MAIN IDEAS | RMI | 15 | |
| READING GAIN INFO DETAILS | RGI | 16 | |
| READING UNDERSTANDING FORMS | RUF | 17 | |
| READING TEST DATE (MM/YY) | RTD | 18 | |
| READING PASS/FAIL (P/F) | RPF | 19 | |
| GRADE 7 FUNCTIONAL MATH TOTAL | MT | 20 | |
| MATH NUMBER CONCEPTS | MNC | 21 | |
| MATH WHOLE NUMBERS | MWN | 22 | |
| MATH MIXED NUMBERS | MN | 23 | |
| MATH DECIMALS | MD | 24 | |
| MATH MEASUREMENT | MM | 25 | |
| MATH USING DATA | MUD | 26 | |
| MATH PROBLEM SOLVING | MPS | 27 | |
| MATH TEST DATE (MM/YY) | MTD | 28 | |
| MATH PASS/FAIL (P/F) | MPF | 29 | |
| TEAM NUMBER | TEAM# | 30 | |
| MATH LEVEL | MLV | 31 | |
| YEAR TO DATE ABSENCES | YTDAB | 32 | |
| DAYS ABSENT LAST YEAR | DALY | 33 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 34 | 7/92 |
| CRT TOTAL MATH SCORE | MCRT | 35 | 7/92 |
| CRT TOTAL READING SCORE | RCRT | 36 | 7/92 |
| COUNT FIELD (VALUE = 1) | C | 37 | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

MIDLEVEL COURSES

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| SECTION NUMBER | SEC | 8 | |
| ELEM FEEDER SCHOOL NUMBER | ESCH | 9 | 7/92 |
| NEXT YEAR'S SCHOOL NUMBER | NSCH | 10 | |
| GROUP CODE | GC | 11 | |
| VALUE: | | | |
| 10 = ENGLISH 35 = FOREIGN LANG | | | |
| 15 = SCIENCE 40 = FINE ARTS | | | |
| 20 = SOC STUDIES 45 = PRACTICAL ARTS | | | |
| 25 = MATH 95 = PHYSICAL ACTIVITY | | | |
| 30 = PE 00 = OTHER | | | |
| G/T (ENROLLED IN ONE OR MORE G/T CLASS) (Y,N) | GT | 12 | |
| COURSE NUMBER | CRS# | 13 | |
| COURSE TITLE | CRSTITLE | 14 | |
| COURSE LEVEL | CRSLV | 15 | |
| CLASS NUMBER | CLASS | 16 | |
| DURATION | DUR | 17 | |
| VALUE: | | | |
| S1 = SEMESTER 1 Q1 = QUARTER 1 | | | |
| S2 = SEMESTER 2 Q2 = QUARTER 2 | | | |
| FY = FULL YEAR Q3 = QUARTER 3 | | | |
| Q4 = QUARTER 4 | | | |
| PERIOD | PD | 18 | |
| TEACHER, LAST NAME | TCHL | 19 | |
| TEACHER, FIRST INITIAL | TCHF | 20 | |
| MARK 1 | M1 | 21 | |
| MARK 1 NUMERIC VALUE | M1# | 22 | |
| VALUE: | | | |
| A=4; B=3; C=2; D=1; E=0; L=0 | | | |
| ALL OTHER MARKS = BLANK | | | |
| MARK 1 DAYS ABSENT | AB1 | 23 | |
| MARK 2 | M2 | 24 | |
| MARK 2 NUMERIC VALUE | M2# | 25 | |
| MARK 2 DAYS ABSENT | AB2 | 26 | |
| MARK 3 | M3 | 27 | |
| MARK 3 NUMERIC VALUE | M3# | 28 | |
| MARK 3 DAYS ABSENT | AB3 | 29 | |
| MARK 4 | M4 | 30 | |
| MARK 4 NUMERIC VALUE | M4# | 31 | |

MIDLEVEL COURSES

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| MARK 4 DAYS ABSENT | AB4 | 32 | |
| FINAL | FNL | 33 | |
| FINAL NUMERIC | FNL# | 34 | |
| TEAM NUMBER | TEAM# | 35 | |
| MATH LEVEL | MLV | 36 | |
| YEAR TO DATE ABSENCES | YTDAB | 37 | |
| DAYS ABSENT LAST YEAR | DALY | 38 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 39 | 7/92 |
| FIRST MARKING PERIOD AVERAGE | MPA1 | 40 | 11/92 |
| SECOND MARKING PERIOD AVERAGE | MPA2 | 41 | 11/92 |
| THIRD MARKING PERIOD AVERAGE | MPA3 | 42 | 11/92 |
| FOURTH MARKING PERIOD AVERAGE | MPA4 | 43 | 11/92 |
| COUNT FIELD (VALUE=1) | C | 44 | |

ELEM STUBIO

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | |
| LAST NAME | LAST | 2 | |
| FIRST NAME | FIRST | 3 | |
| INITIAL | MI | 4 | |
| GRADE | GR | 5 | |
| GENDER | G | 6 | |
| RACE (W,B,H,I,A) | R | 7 | |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | |
| HOUSE NUMBER | HOUSE# | 10 | |
| DIRECTION (N, S, E, W) | DIR | 11 | |
| STREET NAME | STREET | 12 | |
| STREET TYPE | STTYPE | 13 | |
| APARTMENT NUMBER | APT# | 14 | |
| CITY | CITY | 15 | |
| STATE | ST | 16 | |
| ZIP | ZIP | 17 | |
| SECTION NUMBER | SEC | 18 | |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/92 |
| NEXT YEAR'S SCHOOL NUMBER | NSCH | 20 | |
| SPECIAL ED (Y/N) | SPED | 21 | |
| ESOL (Y/N) | ESOL | 22 | |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 23 | |
| ENTRY DATE (MM/DD/YY) | ENTRY | 24 | |
| YEAR TO DATE ABSENCES | YTDAB | 25 | |
| DAYS ABSENT LAST YEAR | DALY | 26 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 27 | 7/92 |
| CRT TOTAL MATH SCORE | MCRT | 28 | 7/92 |
| CRT TOTAL READING SCORE | RCRT | 29 | 7/92 |
| IEP (Y/N) | IEP | 30 | |
| CHAPTER 1 | CH1 | 31 | 7/92 |
| VALUE: | | | |
| M = MATH | | | |
| R = READING | | | |
| B = BOTH | | | |
| FREE & REDUCED LUNCH | F&R | 32 | 7/92 |
| VALUE: | | | |
| F = FREE | | | |
| R = REDUCED | | | |
| N = NOT ELIGIBLE | | | |
| COUNT FIELD (VALUE = 1) | C | 33 | |
| | | | |

| Element | Code | Field # | New Data Avail |
|---|---|---|---|
| STUDENT NUMBER | ID | 1 | 7/92 |
| LAST NAME | LAST | 2 | 7/92 |
| FIRST NAME | FIRST | 3 | 7/92 |
| INITIAL | MI | 4 | 7/92 |
| GRADE | GR | 5 | 7/92 |
| GENDER | G | 6 | 7/92 |
| RACE (W,B,H,I,A) | R | 7 | 7/92 |
| BIRTHDATE (MM/DD/YY) | DOB | 8 | 7/92 |
| PHONE NUMBER (XXX-XXXX) | PHONE | 9 | 7/92 |
| HOUSE NUMBER | HOUSE# | 10 | 7/92 |
| DIRECTION (N, S, E, W) | DIR | 11 | 7/92 |
| STREET NAME | STREET | 12 | 7/92 |
| STREET TYPE | STTYPE | 13 | 7/92 |
| APARTMENT NUMBER | APT# | 14 | 7/92 |
| CITY | CITY | 15 | 7/92 |
| STATE | ST | 16 | 7/92 |
| ZIP | ZIP | 17 | 7/92 |
| SECTION NUMBER | SEC | 18 | 7/92 |
| HOME SCHOOL NUMBER | HSCH | 19 | 7/92 |
| SPECIAL ED (Y/N) | SPED | 20 | 7/92 |
| ESOL (Y/N) | ESOL | 21 | 7/92 |
| ELEMENTARY G/T IDENTIFIED (Y/N) | ELGT | 22 | 7/92 |
| ENTRY DATE (MM/DD/YY) | ENTRY | 23 | 7/92 |
| YEAR TO DATE ABSENCES | YTDAB | 24 | 7/92 |
| DAYS ABSENT LAST YEAR | DALY | 25 | 7/92 |
| DAYS PRESENT LAST YEAR | DPLY | 26 | 7/92 |
| CRT TOTAL MATH SCORE | MCRT | 27 | 7/92 |
| CRT TOTAL READING SCORE | RCRT | 28 | 7/92 |
| FIRST LEVEL OF SERVICE | LS1 | 29 | 7/92 |
| GROUP CODE 1 | GC1 | 30 | 7/92 |
| PRIMARY PROGRAM CODE 1 | PPC1 | 31 | 7/92 |
| SECOND LEVEL OF SERVICE | LS2 | 32 | 7/92 |
| GROUP CODE 2 | GC2 | 33 | 7/92 |
| RELATED SERVICES CODE 2 | RS2 | 34 | 7/92 |
| THIRD LEVEL OF SERVICE | LS3 | 35 | 7/92 |
| GROUP CODE 3 | GC3 | 36 | 7/92 |
| RELATED SERVICES CODE 3 | RS3 | 37 | 7/92 |
| FOURTH LEVEL OF SERVICE | LS4 | 38 | 7/92 |
| GROUP CODE 4 | GC4 | 39 | 7/92 |
| RELATED SERVICES CODE 4 | RS4 | 40 | 7/92 |
| COUNT FIELD (VALUE = 1) | C | 41 | 7/92 |
| | | | |

# APPENDIX M

## MONTGOMERY COUNTY PUBLIC SCHOOLS

## SIMS TRAINING AND SUPPORT

# SIMS TRAINING AND SUPPORT

**TRAINING**
**Large Group**

Spring:

Introductory Meeting for Principals

Summer

Five 3-hour sessions for SIMS teams during the month of July. Elementary teams consist of four people; secondary teams consist of five people. The principal is a member of the training team. The content of the sessions is as follows:

Session 1: Introduction to SIMS
Introduction to the Macintosh and Microsoft Works Data Base

Session 2: Overview of File Layouts
Data Base Topics:
- Sorting
- Record Selection
- Field Attributes
- Saving vs. Save As

Session 3: Data Base Topics:
- Renaming Fields
- Cutting, Copying and Pasting
- Saving Selected Records
- Creating a Data Base

Session 4: Data Base Topics:
- Generating Reports
- Printing
- Review of Hardware
- Macintosh Desktop Overview

Session 5: File Sharing

Fall and Winter

Two 3-hour sessions on word processing using Microsoft Works

Review sessions on data base use

Using the COURSES data base and computing GPA in secondary schools

Sharing Sessions

- Principals with the Deputy Superintendent
- SIMS users meet to share uses with each other

**Small Group**

One 3-hour session is offered for LAN administrators. One LAN administrator is identified per school. The training session reviews housekeeping, backup, and troubleshooting. The LAN administrator serves as a contact person within the school for help and as a contact person for the trainers.

Schools may request small group topical training for their staff throughout the school year.

**SUPPORT**

**Hotline**

The SIMS trainers serve as hotline support for every SIMS school. The hotline is available during all working hours to answer hardware and software questions. If questions cannot be answered over the telephone, a trainer will follow-up with a visit.

**School Visits**

Trainers visit schools in order to update software and help individuals and/or small groups develop applications for SIMS and provide further training.

**User's Manual**

A User's Manual specifically for SIMS users has been developed and is provided for each Macintosh workstation.